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WAC02AS

Vol. 26 No. 3
(Whole Number 314)
March 2002

Next Issue on Sale
February 26, 2002



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Cover illustration by
DOMINIC HARMAN

www.asimovs.com

Asimov's

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have won 39 Hugos
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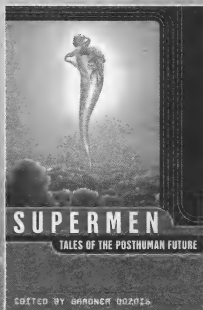
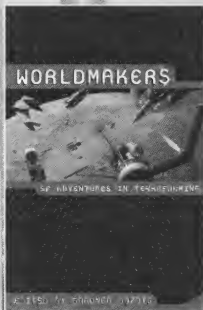
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THE CORDWAINER

So there's a resplendent new award in the science fiction universe: the Cordwainer. It was presented for the first time a few months ago at the World Science Fiction Convention in Philadelphia. Although it's not an award that I have the slightest desire ever to win myself, I'm quite happy to be a key member of the Instrumentality that devised it and chose its first winner.

The Cordwainer—or, to give it its formal name, the Cordwainer Smith Rediscovery Award—is intended, so its bylaws declare, to recognize the creative output of “a science fiction or fantasy writer whose work deserves renewed attention or ‘Rediscovery.’ This writer’s work should display unusual originality and should embody the spirit of Cordwainer Smith’s fiction, according to one or more criteria identified by the Awards Committee from time to time.”

A column of mine in this magazine last year served as the inadvertent inspiration for the new award. This was the one called “The Evaporation of Reputations,” in which I expressed my puzzlement over the fact that the work of the fantasy novelist A. Merritt, fifty years ago the most famous of American fantasy writers, had vanished into such obscurity that it was now necessary for it to be reissued under the imprint of a university press.

My bemusement over the modern-day neglect of Merritt’s books touched off an idea in the mind of Alan C. Elms, who is a professor of psychology at the Davis branch of the University of California, and also a

long-time science fiction reader. Dr. Elms is currently at work on the definitive biography of the writer whom we know as “Cordwainer Smith,” the pseudonym of the remarkable Paul M.A. Linebarger (1913-1966), who gave us such masterpieces as “Scanners Live in Vain,” “The Ballad of Lost C’Mell,” and “The Game of Rat and Dragon.”

“Smith” himself was something of a mystery man during his lifetime. The byline was known to be a pseudonym, but for whom? Gradually the Linebarger name leaked out, and, also gradually, we learned that he had degrees from several universities and a doctorate from Johns Hopkins, had been a legal consultant to the government of China between 1930 and 1936 and a lieutenant colonel in U.S. Army Intelligence during World War II, had been a professor of Asian politics at Harvard, Duke, and Johns Hopkins, and so on and so on, a truly astonishing resume. Somehow he found time to publish a science fiction story, “Scanners Live in Vain,” in 1950, and another in 1955, and then an astonishing string of them all through the first half of the 1960s. Though he loved reading and writing science fiction, he kept away from places where other SF writers gathered: only a few of us, of whom I was not one, ever actually met him. And then in 1966 he was gone, much too soon, right at the peak of his remarkable writing career.

In the course of his biographical research Elms necessarily came in contact with Paul Linebarger’s two daughters, Rosana Hart and Marcia Linebarger, and learned that they

were looking for ways to keep their father's name before the public by way of an organization they had created, called the Cordwainer Smith Foundation. At the suggestion of Ralph Benko, a Washington consultant who, like Alan Elms, is a director of the Cordwainer Smith Foundation, Ms. Hart and Ms. Linebarger had decided that giving an annual award in the name of Cordwainer Smith would be one effective way of doing that. And since most, perhaps all, of Cordwainer Smith's science fiction revolved around an episode in the far future that he referred to as "the Rediscovery of Man," my piece on the current sad state of A. Merritt's literary reputation led very quickly to Elms' proposal that the award be designed to bring about the rediscovery of some great figure of science fiction or fantasy who had fallen into temporary eclipse.

You can see why I have no yearning to win a Cordwainer myself: the chief criterion is that the winner's work must have passed through a prolonged period of unjust lack of public attention, and, although no writer ever thinks his work has had a proper amount of public attention, I've been striving most assiduously over the years to keep myself ineligible for such awards as the Cordwainer. Nor would Cordwainer Smith himself be a likely candidate for the award: his stories have been cherished and reprinted and re-reprinted ever since his premature death three and a half decades ago, and even now the heart of his magnificent *oeuvre* is available in a splendid 671-page volume, *The Rediscovery of Man*, an essential volume in any science fiction library. (It is available from most SF bookshops or from its publisher, the NESFA Press, Box 809, Framingham, MA. 07101, \$24.95.) You can also find out more about Cordwainer Smith at the web site maintained in his name by

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the Foundation—www.cordwainersmith.com—where all manner of Smith-related material is provided.

But the past fifteen years have not been kind to many of the classic SF writers, and much of the most important older material of our field has disappeared from the bookstores. This, I think, is a sad thing not only for the authors of those great books, but for science fiction itself, since writers build on the foundations left them by those who have gone before, and, with the foundation material mostly out of print, the new generations of science fiction writers find themselves working up in mid-air, with no knowledge of their antecedents. As I said when presenting the first Cordwainer, "You all know George Santayana's famous line about how those who forget the past are condemned to repeat it. That's true enough. But there's a worse possibility: Those who forget the past are condemned to make do without it." So when the Cordwainer Smith Foundation invited me to become a member of the panel of experts who would choose the winners of the new award I leaped at the chance.

My three fellow judges are a distinguished crew indeed: a group with an encyclopedic knowledge of science fiction past and present—quite literally so in one case: John Clute, who, with Peter Nicholls, co-edited that indispensable Hugo-winning reference volume, *The Encyclopedia of Science Fiction*. Then we have the estimable Gardner Dozois, who is, of course, the editor of this very magazine and has been honored with a long string of Hugos in recognition of his editorial prowess. His annual *The Year's Best Science Fiction* anthologies form a definitive record of the most important SF stories of the past two decades. The fourth member of the panel is the truly towering Scott Edelman, for-

merly the editor of that superb magazine *Science Fiction Age*, and now the editor-in-chief of *Sci-Fi.com*, which holds a powerful, perhaps pre-eminent, position in the ranks of the Internet science fiction sites.

We four alone—not the Cordwainer Smith Foundation—bear the responsibility for choosing the winner of the Rediscovery Award. Rosana Hart and Alan Elms are ex-officio non-voting jurors, which means that they offer procedural advice to the four voting jurors when such advice is sought, but do not themselves nominate candidates or take part in the deliberations leading to the selection of a winner. Ralph Benko, the Washington consultant, lurks somewhere in the background of the operation—his favorite place, evidently—and Eleanor Lang, formerly of Del Rey Books and now a digital-media executive, serves as executive director of the entire operation.

So, through the magic of e-mail, the judges duly convened in the spring of 2001, names were proposed, a vote was held, and, as was revealed last September at the Philadelphia convention, the first Cordwainer winner was Olaf Stapledon, the author of "Last and First Men," "Odd John," "Star Maker," and other classic science fiction books of the first half of the twentieth century.

What, you ask? Is the famed Olaf Stapledon in need of rediscovery? He whose very name has passed into the vocabulary of science fiction readers, who often speak of the "Stapledonian" scope and power of some new novel of the far future?

Yes, he is. Modern-day science fiction readers may be familiar with such recent "Stapledonian" works as Gregory Benford's *Galactic Center* novels, Dan Simmons' *Hyperion* books, or Greg Bear's *Eon* series. But who has read Stapledon himself? Finding his work is no easy task. No Stapledon novel has ever been

reprinted, so far as I can recall, by any of the American mass-market paperback houses. His books, when they are in print—and that is not always the case—are issued in expensive formats by companies not generally associated with science fiction. If you want to read Stapledon today, you have to search hard to find him: and in our modern out-of-sight, out-of-mind culture, a situation like that leads quickly to the sort of obscurity that the Cordwainer Smith Rediscovery Award has been designed to fight.

It is our hope that the presentation of the first Cordwainer to Olaf Stapledon will lead some enterprising paperback house to bring the haunting *Odd John* or the fabulously visionary *Last and First Men* very

quickly back into print under the banner, *Winner of the Cordwainer Award!* And will do the same with the books of next year's winner, and those of the next one after that, and the one after that, because, alas, science fiction has been shedding its past in a grievous way even as we all march onward into the future.

And, speaking of the future, the Cordwainer Smith Foundation has a second award up its sleeve for next year—the Cordwainer Smith *Discovery* award, which will reward, not the work of some great writer of the past, but that of some dazzling newcomer who, like Cordwainer Smith himself, has astounded everyone right at career outset with brilliantly original work. But more about that award next year. ○

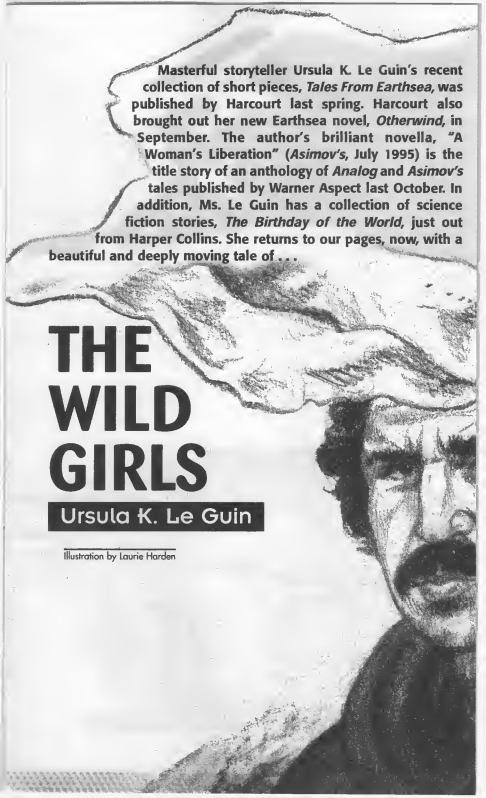


Masterful storyteller Ursula K. Le Guin's recent collection of short pieces, *Tales From Earthsea*, was published by Harcourt last spring. Harcourt also brought out her new Earthsea novel, *Otherwind*, in September. The author's brilliant novella, "A Woman's Liberation" (*Asimov's*, July 1995) is the title story of an anthology of *Analog* and *Asimov's* tales published by Warner Aspect last October. In addition, Ms. Le Guin has a collection of science fiction stories, *The Birthday of the World*, just out from Harper Collins. She returns to our pages, now, with a beautiful and deeply moving tale of . . .

THE WILD GIRLS

Ursula K. Le Guin

Illustration by Laurie Harden





Bela ten Belen went on a foray with five companions. There had been no nomads near the City for several years. Harvesters in the Eastern Fields reported seeing smoke of fires beyond the Dayward Hills, and the six young soldiers declared they would go see how many camps there were. They said nothing about attacking the camps. They took with them as guide a Dirt man, Bedh Handa, who had been born a nomad of the Dayward tribes, captured as a child and brought to the City as a slave. Bedh's sister Nata Belenda, famous for her beauty, was the wife of Bela's brother Alo ten Belen. Bedh had guided forays against the nomad tribes before.

The soldiers walked and ran all day following the course of the East River up into the hills. In the evening they came to the crest of the hills and saw on the plains below them, among the watermeadows and winding streams, three circles of the nomads' skin huts.

"They came to the marshes to gather mudroots," the guide, Bedh, said. "They're not planning a raid on the Fields of the City. If they were, the three camps would be close together."

"Who gathers the roots?" ten Belen asked.

"Men and women. Old people and children stay in the camps."

"When do the people go to the marshes?"

"Early in the morning."

"We'll go down to that nearest camp tomorrow after the gatherers are gone," said ten Belen.

"It would be better to go to the camp beyond that one, the one on the river," Bedh said.

Ten Belen did not answer the Dirt man. He said to his companions, "Those are his people. I think he should be shackled."

They agreed, but none of them had brought shackles. Ten Belen began to tear his cape into strips.

"Why do you want to tie me up, lord?" Bedh asked with his fist to his forehead to show respect. "Have I not guided you to the nomads? Am I not a man of the City? Is not my sister your brother's wife? Is not my nephew your nephew, and a god? Why would I run away from the great wealthy City to those ignorant people who starve in the wilderness, eating mudroots and crawling things?" But the Crown men did not answer the Dirt man. They tied his legs with the lengths of twisted cloth, pulling the knots in the silk so tight they could not be untied but only cut open. Ten Belen appointed three of them to keep watch in turn that night.

Tired from walking and running all day, the young man on watch before dawn fell asleep. Bedh put his legs into the coals of their fire and burned through the silken ropes and stole away.

Waking in the morning and finding the Dirt man gone, Bela ten Belen's face grew heavy with anger, but he said only, "He will have warned that nearest camp. We'll go to the farthest one, off there on the high ground."

"They'll see us crossing the marshes," said Dos ten Han.

"Not if we walk in the rivers," ten Belen said.

When they came down out of the hills onto the flat lands, they walked along streambeds, hidden by the high reeds and willows that grew on the banks. As it was autumn, before the rains, the water was shallow enough that they could make their way along beside it or wade in it. Where the reeds grew thin and low and the stream widened out into the marshes, they crouched down and found what cover they could. No one in the nomad camps saw them pass.

By midday they came near the farthest of the camps, which was on a low grassy rise like an island among the marshes. They could hear the voices of people gathering mudroot on the eastern side of the island. Keeping to the south, they crept up through the high grass and came to the camp. No one was in the circle of skin huts but a few old men and women and a number of children. The children were turning over roots spread on the grass, while the old people cut up the largest roots and put them on racks over low fires to hasten the drying. The six Crown men came among them suddenly with their swords drawn. They cut the throats of the old men and women and then pursued the children, some of whom ran away down into the marshes, though others stood staring, uncomprehending.

All the soldiers were young men on their first foray; they had made no plans. Ten Belen had said to them, "I want to go out there and kill some of those thieves and bring home slaves," which seemed a good plan to them. To his friend Dos ten Han he had said, "I want to get some new Dirt girls, there's not one in the City I can stand to look at." Dos ten Han knew he was thinking about the beautiful nomad-born woman his brother had married. All the young Crown men thought about her and wished they had her, or a girl as beautiful as her.

"Get the girls," ten Belen shouted to the others, and they all ran at the children, seizing one or another. The older children had mostly fled like deer, and only the young ones still stood staring, or began too late to run. The soldiers each caught one or two and dragged them back to the center of the hut-village, where the old people lay in their blood in the sunlight.

They had brought no ropes to tie the children with, and had to keep hold of them. One little girl fought so fiercely, biting and scratching, that the soldier let her go; she ran away screaming shrilly for help. Bela ten Belen ran after her, took her by the hair, and cut her throat to silence her screaming. His sword was sharp and her neck was soft and thin; her body dropped away from her head, held on only by the bones at the back of the neck. He dropped her and came back to the others. He told them each to pick one child they could carry and follow him.

"Where shall we run?" they said. "The people over there will be coming." For the children who had escaped had all run down the east side of the hill toward the marsh where their parents had gone.

"Follow the river back," he said, and set off running, carrying a girl of about five years old. He held her wrists and slung her on his back as if she were a sack. The others followed him, each with a child, two of them babies a year or two old.

The raid had occurred so quickly that they had a long lead on the nomads who came straggling round the hill following the children who had run to them. The soldiers were able to get down into the rivercourse, where the banks and reeds hid them from people looking for them even from the top of the island.

The nomads scattered out through the reedbeds and meadows west of the island, looking for them on their way back to the City.

Ten Belen led them not west but southeast, down a branch of the river. They trotted and ran and walked as best they could in the water and mud and rocks of the riverbed. At first they heard voices far away behind them. The heat and light of the sun filled the world. The air above the reeds was thick with stinging insects. Their eyes soon swelled almost closed with bites and burned with salt sweat. Crown men are not used to carrying burdens

and they found the children they carried heavy, even the little ones. They struggled to go fast but went slower and slower along the winding channels of the water, listening for the nomads behind them. When the children made any noise, the soldiers slapped or shook them till they were still. The girl Bela ten Belen carried hung like a stone on his back and never made any sound.

When at last the sun sank behind the Dayward Hills, that seemed strange to them, for they had always seen the sun rise behind those hills. They had gone a long way south and were still a long way east of the hills. They had heard no sound of their pursuers since early in their flight. The gnats and mosquitoes growing even thicker with dusk drove them at last up onto a drier meadowland, where they could sink down in a place where deer had lain and be hidden by the high grasses. There they all lay while the light died away. The great herons of the marsh flew over with heavy wings. Birds down in the reeds called. The men heard each other breathing, and the whine and buzz of insects. The little children made tiny whimpering noises, but not often, and not loud. Even the babies of the nomad tribes were used to fear and silence.

As soon as the soldiers had let go of them, making threatening gestures to them not to try to run away, the children crawled together and huddled up into a little mound, holding one another. Their faces were swollen with insect bites and one of the babies looked dazed and feverish. There was no food, but none of the children complained.

The light sank away from the marshes, and the insects grew silent. Now and then a frog croaked, startling the men as they sat silent, listening.

Ten Han pointed northward: he had heard a sound, a rustling in the grasses, not far away.

They heard the sound again. They unsheathed their swords as silently as they could.

Where they were looking, kneeling, straining to see through the high grass without revealing themselves, suddenly a ball of faint light rose up and wavered in the air, fading and brightening. They heard a voice, shrill and faint, singing. The hair stood up on their heads and arms as they stared at the bobbing blur of light and heard the meaningless words of the song.

The child that ten Belen had carried suddenly called out a word. The oldest, a thin girl of eight or so who had been a heavy burden to Dos ten Han, hissed at her and tried to make her be still, but the younger child called out again, and an answer came.

Singing, talking, and babbling shrilly, the voice came nearer. The grasses rustled and shook so much that the men expected a whole group of people, but only one head appeared among the grasses. A single child appeared. She kept talking, stamping, waving her hands so that they would know she was not trying to surprise them. The soldiers stared at her, holding their drawn swords. She looked to be nine or ten years old. She came closer, hesitating all the time, but not stopping, watching the men all the time, but talking to the children. Ten Belen's girl got up and ran to her and they clung to each other. Then, still watching the men, the new girl sat down with the other children. She and ten Han's girl talked a little in low voices. She held ten Belen's girl in her arms, on her lap, and the little girl fell asleep almost at once.

"It must be that one's sister," one of the men said.

"She must have tracked us from the beginning," said another.

"Why didn't she call the rest of her people?"

"Maybe she did."

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"Maybe she was afraid to."

"Or they didn't hear."

"Or they did."

"What was that light?"

"Marsh fire."

"Maybe it's them."

"Marsh fire."

They were all silent, listening, watching. It was almost dark. The lamps of the City of Heaven were being lighted, reflecting the lights of the City of Earth, making the soldiers think of that city, which seemed as far away as the one above them in the sky. The faint bobbing light had died away. There was no sound but the sigh of the night wind in the reeds and grasses.

The soldiers argued in low voices about how to keep the children from running off during the night. Each may have thought that he would be glad enough to wake and find them gone, but did not say so. Ten Han said the smaller ones could hardly go any distance in the dark. Ten Belen said nothing, but took out the long lace from one of his sandals and tied one end around the neck of the little girl he had taken and the other end around his own wrist; then he made the child lie down, and lay down to sleep next to her. Her sister, the one who had followed them, lay down by her on the other side. Ten Belen said, "Dos, keep watch first, then wake me."

So the night passed. The children did not try to escape, and no one came on their trail.

The next day they kept going south but also west, so that by mid-afternoon they reached the hills. They did not try to run. The older children, even the five-year-old, walked, and they passed the two babies from one man to another, so their pace was steady if not fast. Along in the morning, the girl who had joined them pulled at ten Belen's tunic and kept pointing left, to a marsh: she made gestures of pulling up roots and eating. Since they had eaten nothing for two days, they followed her to the marsh. The older children waded out into the water and pulled up certain wide-leaved plants by the roots. They began to cram what they pulled up into their mouths, but the soldiers waded after them and took the muddy roots and ate them till they had had enough. Dirt people do not eat before Crown people eat. The children did not seem surprised.

When she had finally got a root for herself, the girl who had joined them pulled up another, chewed it up and spat it out into her hand for the babies to eat. One of them ate eagerly from her hand, but the other would not; she lay where she had been put down, and her eyes did not seem to see. Ten Han's girl and the one who had joined them held her and tried to make her drink water. She would not drink.

Dos ten Han stood in front of them and said, pointing to the elder girl, "Vui Handa," naming her Vui and saying she belonged to his family. Bela named the one who had joined them Modh Belenda, and her little sister, the one he had carried off, he named Mal Belenda. The others named their prizes; but when Ralo ten Bal pointed at the sick baby to name her, the girl who had joined them, Modh, got between him and the baby, vigorously gesturing no, no, and putting her hand to her mouth for silence.

"What's she up to?" Ralo asked. He was the youngest of them, sixteen.

Modh kept up her pantomime: she lay down, lolled her head, and half opened her eyes, like a dead person; she leapt up with her hands held like claws and her face distorted, and pretended to attack Vui; she pointed at the sick baby.

The young men stood staring. It seemed she meant the baby was dying. The rest of her actions they did not understand.

Ralo pointed at the baby and said, "Groda," which is what Dirt people who have no owner and work in the field teams are called—Nobody's.

"Come on," ten Belen ordered, and they made ready to go on. Ralo walked off, leaving the sick child lying.

"Aren't you bringing your Dirt?" one of the others asked him.

"What for?" he said.

Modh picked up the sick baby, Vui picked up the other one, and they went on. After that the soldiers let the older girls carry the sick baby, though they themselves passed the well one about so as to make better speed.

When they got up on dry ground in the hills, away from the clouds of stinging insects and the wet and heavy heat of the marshlands, the young men were glad; they felt they were almost safe now; they wanted to move fast and get back to the City. But the children, worn out, struggled to climb the steep hills. Vui, who was carrying the sick baby, straggled along slower and slower. Ten Han, her owner, slapped her legs with the flat of his sword to make her go faster. "Ralo, take your Dirt, we have to keep going," he said.

Ralo turned back angrily. He took the sick baby from Vui. The baby's face had gone greyish and its eyes were half closed, like Modh's in her pantomime. Its breath whistled a little. Ralo shook the child. Its head flopped. Ralo threw it away into the bushes. "Come on, then," he said, and set off walking fast uphill.

Vui tried to run to the baby, but ten Han kept her away from it with his sword, stabbing at her legs, and drove her on up the hill in front of him.

Modh dodged back to the bushes where the baby was, but ten Belen prevented her, herding her in front of him with his sword. As she kept dodging and trying to go back, he seized her by the arm, slapped her hard, and dragged her after him by the wrist. Little Mal stumbled along behind them.

After they had gone a long way, Vui began to make a shrill long-drawn cry, a keening, and so did Modh and Mal, and though the soldiers shook and beat them till they stopped, soon they would start again. The soldiers did not know if they were far enough from the nomads and near enough the Fields of the City that they need not fear pursuers hearing the sound. They hurried on, carrying or dragging or driving the children, and the shrill keening cry went with them like the sound of the insects in the marshlands.

It was almost dark when they got to the crest of the Dayward Hills. Forgetting how far south they had gone, the men expected to look down on the Fields and the City. They saw only dusk falling on the lands, and the dark west, and the far lights of the City of the Sky beginning to burn.

They settled down in a clearing, for all were very tired. The children huddled together and were asleep almost at once. Ten Belen forbade the men to make fire. They were hungry, but there was a creek down the hill to drink from. Ten Belen set Ralo ten Bal on first watch. Ralo was the one who had gone to sleep, their first night out, allowing Bedh to escape.

Ten Belen woke in the night, cold; he missed his cape, which he had torn up to make bonds. He saw that someone had made a small fire and was sitting cross-legged beside it. "Ralo!" he said angrily, and then saw that the man was not Ralo but the guide Bedh.

Ralo lay motionless nearby. Ten Belen drew his sword.

"He fell asleep again," the Dirt man said, grinning at ten Belen.

Ten Belen kicked Ralo, who snorted and sighed and did not wake. Ten Be-

len leapt up and went round to the others, fearing Bedh had killed them in their sleep, but they had their swords, and were sleeping soundly; and the children lay in a little heap. He returned to the fire and stamped it out.

"Those people are miles away," Bedh said. "They won't see the fire. They never found your track."

"Where did you go?" ten Belen asked him after a while, puzzled and suspicious. He did not understand why the Dirt man had come back.

"To see my people in the village."

"Which village?"

"The one nearest the hills. My people are the Allulu. I saw my grandfather's hut from up in the hills. I wanted to see the people I used to know. My mother's still alive, but my father and brother have gone to the Sky City. I talked with my people and told them a foray was coming. They waited for you in their huts. They would have killed you, but you would have killed some of them. I was glad you went on to the Tullu village."

It is fitting that a Crown ask a Dirt person questions, but not that he converse or argue with him. Ten Belen, however, was so disturbed that he said sharply, "Dirt does not go to the Sky City. Dirt goes to dirt."

"So it is," Bedh said politely, as a slave should, with his fist to his forehead. "My people believe that they go to the sky, but of course they wouldn't go to the palaces of the City there. Maybe they wander in the wild, dirty parts of the sky." He poked at the fire to see if he could start a flame, but it was dead. "But they can only go up there if they have been buried," he said. "If they're not buried, their soul stays down here on earth. It's likely to turn into a very bad thing then. A bad spirit. A ghost."

"How long have you been following us?" ten Belen demanded.

"A long way."

"Why?"

Bedh looked puzzled, and put his fist to his forehead. "I belong to Master ten Han," he said. "I eat well, and live in a fine house, and am respected in the City. I don't want to stay with the Allulu. They're very poor."

"But you ran away!"

"I wanted so much to see my people," Bedh said. "And I did not want them to be killed. I only would have shouted to them to warn them. But you tied my legs. That made me so sad. You did not trust me. I could think only about my people, and so I ran away. I am sorry, my lord."

"You would have warned them. They would have killed us!"

"Yes," Bedh said. "But if you had let me guide you, I would have taken you to the Bustu or the Tullu village and helped you catch children. Those are not my people. I was born an Allulu and am a man of the City. My sister's child is a god. I am to be trusted."

Ten Belen turned away and said nothing.

He saw the starlight in the eyes of a child, her head raised a little, watching and listening. It was the one who had followed them to be with her sister.

"That one," Bedh said. "That one, too, will mother gods."

II

Chergo's Daughter and Dead Ayu's First Daughter, who were now Vui and Modh, whispered in the grey of the morning before the men woke.

"Do you think she's dead?" Vui whispered.



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"I heard her crying. All night."

They both lay listening.

"That one named her," Vui whispered very low. "She can follow us."

"She will."

The little sister, Mal, was awake, listening. Modh put her arm around her and whispered, "Go back to sleep."

Near them, Bedh suddenly sat up, scratching his head. The girls stared wide-eyed at him.

"Well, Daughters of Tullu," he said in their language spoken the way the Allulu spoke it, "you're Dirt people now."

They stared and said nothing.

"You're going to live in heaven on earth," he said. "A lot of food. Big, rich huts to live in. And you don't have to carry your house around on your back across the world! You'll see. Are you virgins?"

After a while they nodded.

"Stay that way if you can," he said. "Then you can marry gods. Big, rich husbands! These men are gods. But they can only marry Dirt women. So look after your little cherrystones, keep them from Dirt boys and men like me, and then you can be a god's wife and live in a golden hut." He grinned at their staring faces and stood up to piss on the cold ashes of the fire.

While the Crown men were rousing, Bedh took the older girls into the forest to gather berries from a tangle of bushes nearby; he let them eat some, but made them put most of what they picked into his cap. He brought the cap full of berries back to the soldiers and offered them, his knuckles to his forehead. "See," he said to the girls, "this is how you must do. Crown people are like babies and you must be their mothers."

Modh's little sister Mal and the younger children were silently weeping with hunger. Modh and Vui took them to the stream to drink. "Drink all you can, Mal," Modh told her sister. "Fill up your belly. It helps." Then she said to Vui, "Man-babies!" and spat. "Men who take food from children!"

"Do as the Allulu says," said Vui.

It was some comfort to have a man who spoke their language with them. The soldiers now ignored them, leaving Bedh to look after them. He was kind enough, carrying the little ones, sometimes two at a time, for he was strong. He told Vui and Modh stories about the place where they were going. Vui began to call him Uncle. Modh would not let him carry Mal, and did not call him anything.

Modh was eleven. When she was six, her mother had died in childbirth, and she had always looked after the little sister.

When she saw the golden man pick up her sister and run down the hill, she ran after them with nothing in her mind but that she must not lose the little one. The men went so fast at first that she could not keep up, but she did not lose their trace, and kept after them all that day. She had seen her grandmothers and grandfathers slaughtered like pigs. She thought everybody she knew in the world was dead. Her sister was alive and she was alive. That was enough. That filled her heart.

When she held her little sister in her arms again, that was more than enough.

But then, in the hills, the cruel one threw away Sio's Daughter, and the golden one kept her from going to pick her up. She tried to look back at the place in the bushes where the baby lay, she tried to see the trees there so she could remember the place, but the golden man hit her so she was dizzy

and drove and dragged her up the hill so fast her breath burned in her chest and her eyes clouded with pain. Sio's Daughter was lost. She would die there in the bushes. Foxes and wild dogs would eat her flesh and break her bones. A terrible emptiness came into Modh, a hollow, a hole of fear and anger that everything else fell into. She would never be able to go back and find the baby and bury her. Children before they are named have no ghosts, even if they are unburied, but the cruel one had named Sio's Daughter. He had pointed and named her: Groda. Groda would follow them. Modh had heard the thin cry in the night. It came from the hollow place. What could fill that hollow? What could be enough?

III

Bela ten Belen and his companions did not return to the City in triumph, but neither did they have to creep in by back ways at night as unsuccessful forays did. They had not lost a man, and they brought back six slaves, all female. Only Ralo ten Bal brought nothing, and the others joked about how he fell asleep on watch. And Bela ten Belen joked about his own luck in catching two fish on one hook, telling how the girl had followed them of her own will to be with her sister.

As he thought about the foray, he realized that they had been lucky indeed, and that their success was due not at all to him, but to Bedh. If Bedh had told them to do so, the Allulu would have ambushed and killed the soldiers before they ever reached the other village. The slave had saved them. His loyalty seemed natural and expectable to Bela, but he honored it. He knew Bedh and his sister Nata, Bela's brother's wife, were fond of each other, but could rarely see each other, since Bedh belonged to the Hans. When the opportunity arose, he traded two of his own house-slaves for Bedh and made him overseer of the Belen House slave compound.

Bela had gone slave-catching because he wanted a girl to bring up in the house with his mother and sisters and his brother's wife: a young girl, to be trained and formed to his desire until he married her.

Some Crown men were content to take their Dirt wife from the dirt, from the slave quarters of their own compound or the barracks of the city, to get children on her, keep her in the hanan, and have nothing else to do with her. Others were more fastidious. Bela's mother had been brought up from birth in a Crown hanan, raised to be a Crown's wife. His brother's wife, caught on a foray when she was four, had lived at first in the slave barracks; but within a few years a Root slave-merchant, speculating on the child's beauty, had traded five male slaves for her and kept her in his hanan so that she would not be raped or lie with a man till she could be sold as a wife. Nata's beauty became famous, and many Crown men sought to marry her. When she was fifteen, the Belens traded the produce of their best field and the use of a whole building in Copper Street for her. Like her mother-in-law, she was treated with honor in the Belen household.

Finding no girl in the barracks or hanans that interested him, Bela had resolved to go catch a wild one; and had succeeded doubly.

At first he thought to keep Mal and send Modh to the barracks. But though Mal was charming, with a plump little body and big, long-lashed eyes, she was only five years old. He did not want sex with a baby, as some men did. Modh was eleven, still a child, but not for long. She was not beau-

tiful, but vivid. Her courage in following her sister had impressed him. He brought both sisters to the hanan of the Belen house and asked his sister, his sister-in-law, and his mother to see that they were properly brought up.

It was strange to the girls to hear Nata Belenda speak words of their language, for to them she seemed a creature of another order—as did Hehum Belenda, the mother of Bela and Alo, and Tudju Belen, the sister. All three women were tall and clean and soft-skinned, with soft hands and long lustrous hair. They wore garments of cobweb colored like spring flowers, like sunset clouds. They were surely goddesses. But Nata Belenda smiled and was gentle and tried to talk to the children in their own tongue, though she remembered little of it. Hehum was grave and stern-looking, but quite soon she took Mal onto her lap to play with Nata's baby boy. Tudju was the one who most amazed them. She was not much older than Modh, but a head taller, and Modh thought she was wearing moonlight—her robes were cloth of silver, which only Crown women could wear. A heavy silver belt slanted from her waist to her hip, with a marvelously worked silver sheath hanging from it. The sheath was empty, but she pretended to draw a sword from it, and flourished the sword of air, and lunged with it, and laughed to see little Mal still looking for the sword. But she showed the girls that they must not touch her; she was sacred, that day. They understood that.

Living with these women in the great house of the Belens, they began to understand many more things. One was the language of the City. It was not so different from theirs as it seemed at first, and within a few weeks they were babbling along in it.

After three months they attended their first ceremony at the Great Temple, Tudju's coming of age. They all went in procession to the Great Temple. To Modh it was wonderful to be out in the open air again, for she was weary of walls and ceilings. Being Dirt women, they sat behind the yellow curtain, but they could see Tudju choose her sword from the row of swords hanging behind the altar. She would wear it the rest of her life, whenever she went out of the house. Only women born to the Crown wore swords. No one else in the City was allowed to carry any weapon, except Crown men when they served as soldiers. Modh and Mal knew that, now. They knew many things, and also knew there was much more to learn—everything one had to know to be a woman of the City.

It was easier for Mal. She was young enough that to her the City rules and ways soon became the way of the world. Modh had to unlearn the rules and ways of the Tullu people first. But as with the language, some things were more familiar than they first seemed. Modh knew that when a Tullu man was elected chief of the village, he had to marry a slave woman, even if he already had a wife. Here, the Crown men were all chiefs, and they all had to marry Dirt women—slaves. It was the same rule, only, like everything in the City, made greater and more complicated.

In the village, there had been only one kind of person. Here there were three kinds. You could not change your kind, and you could not marry your kind. There were the Crowns, who owned land and slaves, and were all chiefs, priests, gods on earth. And the Dirt people, who were slaves, less than human, even though a Dirt woman who married a Crown might be treated almost like a Crown herself—like the Belendas. And there were the other people, the Roots.

Modh knew little about the Roots. She asked Nata about them and observed what she could from the seclusion of the hanan. Crown men must

marry Dirt women, but Crown women, if they married, had to marry Root men. When she got her sword, Tudju also acquired several suitors, Root men who came with packages of sweets and stood outside the hanan curtain and said polite things, and then went and talked to Alo and Bela, who were the lords of Belen since their father was dead. These Root men were rich. Root people oversaw planting and harvest, the storehouses and marketplaces. Root women were in charge of housebuilding, and all the marvelous clothes the Crowns wore were made by Root women.

Root women had to marry Dirt men. There was a Root woman who wanted to buy Bedh and marry him. Alo and Bela had told him they would sell him or keep him, as he chose. He had not decided yet.

Root people owned slaves, but they owned no land, no houses. All real property belonged to Crowns. "So," said Modh, "Crowns let the Root people live in the City, let them have this house or that, in exchange for the work they do and what their slaves grow in the fields."

"As a *reward* for working," Nata corrected her, always gentle, never scolding. "The Sky Father made the City for his sons, the Crowns. And they reward good workers by letting them live in it. As our owners, Crowns and Roots, reward us for work and obedience by letting us live, and eat, and have shelter."

Modh did not say, "But—"

It was perfectly clear to her that the system was in fact one of exchange, and that it was not fair exchange. She came from just far enough outside it to be able to look at it. And, being excluded from reciprocity, any slave can see the system with an undeluded eye. But Modh did not know of any other system, any possibility of another system, which would have allowed her to say "But." Neither did Nata know of that alternative, that possible even when unattainable space in which there is room for justice, in which the word "But" can be spoken usefully.

Nata had undertaken to teach the Tullu girls how to live in the City, and she did so with honest care. She taught them the rules. She taught them what was believed. The rules did not include justice, so she did not teach them justice. If she did not herself believe what was believed, yet she taught them how to live with those who did. Modh was wild and bold when she came, and Nata could easily have let her think she had rights, encouraged her to rebel, and then watched her be whipped or mutilated or sent to the fields to be worked to death. Some slave women would have done so. Nata, kindly treated most of her life, treated others kindly. Warm-hearted, she took the girls to her heart. Her own baby boy was a Crown, she was proud of her godling, but she loved the wild girls too. She liked to hear Bedh and Modh talk in the language of the nomads, as they did sometimes. Mal had forgotten it by then.

Mal soon grew out of her plumpness and became as thin as Modh. After a couple of years in the City both girls were very different from the tough little wildcats Bela ten Belen had caught. They were slender, delicate-looking. They ate well, but lived soft. Indeed, these days they might not have been able to keep up the cruel pace of their captors' flight to the City. They got little exercise but dancing, and had no work to do. Conservative Crown families like the Belens did not let their slave wives do work that was beneath them; and all work was beneath a Crown. Modh would have gone mad with boredom if the grandmother had not let her run and play in the courtyard of the compound, and if Tudju had not taught her to sword-dance and to fence.

Tudju loved her sword and the art of using it, which she studied daily with an older priestess. Equipping Modh with a blunted bronze practice sword, she passed along all she learned, so as to have a partner to practice with. Tudju's sword was extremely sharp, but she already used it skillfully, and never once hurt Modh.

Tudju had not yet accepted any of the suitors who came and murmured at the yellow curtain of the hanan. She imitated them mercilessly after they left, so that the hanan rocked with laughter. She claimed she could smell each one coming—the one that smelled like boiled chard, the one that smelled like cat-dung, the one that smelled like old men's feet. She told Modh, in secret, that she did not intend to marry, but to be a priestess and a judge-councilor. But she did not tell her brothers that. They were expecting to make a good profit in food-supply or clothing from Tudju's marriage; they lived expensively, as Crowns should, and the Belen larders and clothes-chests had been supplied too long by bartering rentals for goods. Nata alone had cost twenty years' rent on their best property.

Modh had friends among the Belenda slaves and was very fond of Tudju, Nata, and old Hehum, but loved no one as she loved Mal. Mal was all she had left of her old life, and she loved in her all that she had lost for her. Perhaps Mal had always been the only thing she had: her sister, her child, her charge, her soul.

She knew now that most of her people had not been killed, that her father and the rest of them were no doubt following their annual round across the plains and hills and waterlands; but she never seriously thought of trying to escape and find them. Mal had been taken, she had followed Mal. There was no going back. And as Bedh had said to them, it was a big, rich life here.

She did not think of the grandmothers and grandfathers lying slaughtered or Dua's Daughter who had been beheaded. She had seen all that yet not seen it; it was her sister she had seen. Her father and the others would have buried all those people and sung the songs for them. They were here no longer. They were going on the bright roads and the dark roads of the sky, dancing in the bright hut-circles up there.

She did not hate Bela ten Belen for leading the raid, killing Dua's Daughter, stealing her and Mal and the others. Men did that, nomads as well as City men. They raided, killed people, took food, took slaves. That was the way men were. It would be as useless to hate them for it as to love them for it.

But there was one thing that should not have been, that should not be, and yet continued endlessly to be, the small thing, the nothing that when she remembered it made the rest, all the bigness and richness of life, shrink up into the shriveled meat of a bad walnut, the yellow smear of a crushed fly.

It was at night that she knew it, she and Mal, in their soft bed with cob-web sheets, in the safe darkness of the warm, high-walled house: Mal's in-drawn breath, the cold chill down her own arms, *do you hear it?*

They clung together, listening, hearing.

Then in the morning Mal would be heavy-eyed and listless, and if Modh tried to make her talk or play she would begin to cry, and Modh would sit down at last and hold her and cry with her, endless, useless, dry, silent weeping. There was nothing they could do. The baby followed them because she did not know who else to follow.

Neither of them spoke of this to anyone in the household. It had nothing to do with these women. It was theirs. Their ghost.

Sometimes Modh would sit up in the dark and whisper aloud, "Hush, Groda! Hush, be still!" And there might be silence for a while. But the thin wailing would begin again.

Modh had not seen Vui since they came to the City. Vui belonged to the Hans, but she had not been treated as Modh and Mal had. Dos ten Han bargained for a pretty girl from a Root wife-broker, and Vui was one of the slaves he bartered for that wife. If she were still alive, she did not live where Modh could reach her or hear of her. Seen from the hills, as she had seen it that one time, the City did not look very big in the great slant and distance of the plowlands and meadows and forests stretching on to the west; but if you lived in it, it was as endless as the plains. You could be lost in it. Vui was lost in it.

Modh was late coming to womanhood, by City standards: fourteen. Hehum and Tudju held the ceremony for her in the worship-room of the house, a full day of rituals and singing. She was given new clothes. When it was over Bedh came to the yellow curtain, called to her, and put into her hands a little deerskin pouch, crudely stitched.

She looked at it, puzzled. Bedh said, "You know, in the village, a girl's uncle gives her a *delu*," and turned away. She caught his hand and thanked him, touched, half-remembering the custom and fully knowing the risk he had run in making his gift. Dirt people were forbidden to do any sewing; it was a Root prerogative. A slave found with a needle and thread could have a hand cut off. Like his sister Nata, Bedh was warm-hearted. Modh and Mal had called him Uncle for years now.

Alo ten Belen had three sons from Nata by now to be priests and soldiers of the House of Belen. Alo came most nights to play with the little boys and take Nata off to his rooms, but they saw little of Bela in the hanan. His friend Dos ten Han had given him a concubine, a pretty, teasing, experienced woman who kept him satisfied for a long time. He had forgotten about the nomad sisters, lost interest in his plans of educating them. Their days passed peacefully and cheerfully. As the years went by, their nights too grew more peaceful. The crying now came seldom to Modh, and only in a dream, from which she could waken.

But always, when she wakened so, she saw Mal's eyes wide in the darkness. They said nothing, but held each other till they slept again.

In the morning, Mal would seem quite herself; and Modh would say nothing, fearing to upset her sister, or fearing to make the dream no dream.

Then things changed.

Tudju's brothers called for her; she was gone all day, and came back to the hanan looking fierce and aloof, fingering the hilt of her silver sword. When her mother went to embrace her, Tudju made the gesture that put her aside. All these years with Tudju in the hanan it had been easy to forget that she was a Crown woman, the only Crown among them; that the yellow curtain was to separate them, not her, from the sacred parts of the house; that she was herself a sacred being. But now she had to take up her birthright.

"They want me to marry that fat Root man, so we can get his shop and looms in Silk Street," she said. "I will not. I am going to live at the Great Temple." She looked around at them all, her mother, her sister-in-law, Mal, Modh, the other slave women. "I'll send here what I'm given there," she said. "This House isn't as poor as Alo says it is. But I told Bela that if he gives one finger's width of land for that woman he wants now, I'll send nothing from the Temple. He can go slave-catching again to feed her. And you." She looked

again at Mal and Modh. "Keep an eye on him," she said. "It is time he married."

Bela had recently traded his concubine and the Dirt son she had borne him, making a good bargain in cropland, and promptly offered nearly the whole amount for another woman he had taken a fancy to. It was not a question of marriage, for a Dirt woman, to marry, must be a virgin, and the woman he wanted had been owned by several men. Alo and Tudju had prevented the bargain, which he could not make without their consent. It was, as Tudju said, time for Bela to consider his sacred obligation to marry and beget children of the sky on a woman of the dirt.

So Tudju left the hanan and the house to serve in the Great Temple, only returning sometimes on formal visits. She was replaced, evenings, by her brother Bela. Dour and restless, like a dog on a chain, he would stalk in after Alo, and watch the little boys run about and the slaves' games and dances.

He was a tall man, handsome, lithe and well-muscled. From the day she first saw him in the horror and carnage of the foray, to Modh he had been the golden man. She had seen many other golden men in the City since then, but he was the first, the model.

She had no fear of him, other than the guardedness a slave must feel toward the master; he was spoilt, of course, but not capricious or cruel; even when he was sulky he did not take out his temper on his slaves. Mal, however, shrank from him in uncontrollable dread. Modh told her she was foolish. Bela was nearly as good-natured as Alo, and Mal trusted Alo completely. Mal just shook her head. She never argued, and grieved bitterly when she disagreed with her sister on anything, but she could not even try not to fear Bela.

Mal was thirteen. She had her ceremony (and to her too Bedh secretly gave a crude little "soulbag"). In the evening of that day she wore her new clothing. Dirt people even when they lived with Crowns could not wear sewn garments, only lengths of cloth; but there are many graceful ways of draping and gathering unshaped material, and though the spidersilk could not be hemmed, it could be delicately fringed and tasseled. Mal's garments were undyed silk, with a bluegreen veil so fine it was transparent.

When she came in, Bela looked up, and looked at her, and went on looking.

Modh stood up suddenly without plan or forethought and said, "Lords, Masters! May I dance for my sister's festival?" She scarcely waited for their consent, but spoke to Lui, who played the tablet-drums for dancers, and ran to her room for the bronze sword Tudju had given her and the pale flame-colored veil that had been given her at her festival. She ran back with the veil flowing about her. Lui drummed, and Modh danced. She had never danced so well. She had never danced the way she did now, with all the fierce formal precision of the sword-dance, but also with a wildness, a hint of threat in her handling of the blade, a sexual syncopation to the drumbeat that made Lui's drumming grow ever faster and fiercer in response, so that the dance gathered and gathered like a flame, hotter and brighter, the translucent veil flowing, whirling at the watchers' faces. Bela sat motionless, fixed, gazing, and did not flinch even when the veil struck its spider-web blow across his eyes.

When she was done he said, "When did you learn to dance like that?"

"Under your eyes," she said.

He laughed, a little uneasy. "Let Mal dance now," he said, looking around for her.

"She's too tired to dance," Modh said. "The rites were long. She tires easily. But I will dance again."

He motioned her to go on dancing with a flick of his hand. She nodded to Lui, who grinned widely and began the hesitant, insinuating beat of the slow dance called mimei. Modh put on the ankle-bells Lui kept with her drums; she arranged her veil so that it covered her face and body and arms, baring only her ankles with the jingling anklets and her naked feet. The dance began, her feet moving slightly and constantly, her body swaying, the beat and the movements slowly becoming more intense.

She could see through the gauzy silk; she could see the stiff erection under Bela's silk tunic; she could see his heart beat in his chest.

After that night Bela hung around Modh so closely that her problem was not to draw his attention but to prevent his getting her alone and raping her. Hehum and the other women made sure she was never alone, for they were eager for Bela to marry her. They all liked her, and she would cost the House of Belen nothing. Within a few days Bela declared his intention to marry Modh. Alo gave his approval gladly, and Tudju came from the Temple to officiate at the marriage rites.

All Bela's friends came to the wedding. The yellow curtain was moved back from the dancing room, hiding only the sleeping rooms of the women.

For the first time in seven years Modh saw the men who had been on the foray. The man she remembered as *the big one* was Dos ten Han; Ralo ten Bal was *the cruel one*. She tried to keep away from Ralo, for the sight of him disturbed her. The youngest of the men, he had changed more than the others, yet he acted boyish and petulant. He drank a lot and danced with all the slave girls.

Mal hung back as always, and even more than usual; she was frightened without the yellow curtain to hide behind, and the sight of the men from the foray made her tremble. She tried to stay close to Hehum. But the old woman teased her gently and pushed her forward to let the Crown men see her, for this was a rare chance to show her off. She was marriageable now, and these Crown men might pay to marry her rather than merely use her. She was very pretty, and might bring back a little wealth to the Belens.

Modh pitied her misery, but did not worry about her safety even among drunken men. Hehum and Alo would not let anybody have her virginity, which was her value as a bride.

Bela stayed close beside Modh every moment except when she danced. She danced two of the sword dances and then the mimei. The men watched her breathlessly, while Bela watched her and them, tense and triumphant. "Enough!" he said aloud just before the end of the veiled dance, perhaps to prove he was master even of this flame of a woman, perhaps because he could not restrain himself. She stopped instantly and stood still, though the drum throbbed on for a few beats.

"Come," he said. She put out her hand from the veil, and he took it and led her out of the great hall, to his apartments. Behind them was laughter, and a new dance began.

It was a good marriage. They were well matched. She was wise enough to obey any order he gave immediately and without any resistance, but she never forestalled his orders by anticipating his wishes, babying him, coddling him, as most slave women he knew had done. He felt in her an un-

yieldingness that allowed her to be obedient yet never slavish. It was as if in her soul she were indifferent to him, no matter what their bodies did; he could bring her to sexual ecstasy or, if he liked, he could have had her tortured, but nothing he did would change her, would touch her; she was like a wildcat or a fox, not tamable. This impassability, this distance kept him drawn to her, trying to lessen it. He was fascinated by her, his little fox, his vixen. In time they became friends as well. Their lives were boring; they found each other good company.

In the daytime, he was off, of course, still sometimes playing in the ball courts with his friends, performing his priestly duties at the temples, and increasingly often going to the Great Temple. Tudju wanted him to join the Council. She had a considerable influence over Bela, because she knew what she wanted and he did not. He never had. There was not much for a Crown man to want. He had imagined himself a soldier until he led the foray over the Dayward Hills. Successful as it had been, in that they had caught slaves and come home safe, he could not bear to recall the murders, the hiding, the proof of his own ineptitude, those days and nights of fear, confusion, disgust, exhaustion, and shame. So there was nothing to do but play in the ballcourts, officiate at rites, and drink, and dance. And now there was Modh. And sons of his own to come. And maybe, if Tudju kept at him, he would become a councilor. It was enough.

For Modh, it was hard to get used to sleeping beside the golden man and not beside her sister. She would wake in the darkness, the weight of the bed and the smell and everything wrong. She would want Mal then, not him. But in the daytime she would go back to the hanan and be with Mal and the others just as before, and then he would be there in the evening, and it would have been all right, it would have been good, except for Ralo ten Bal.

Ralo had noticed Mal on the wedding night, cowering near Hehum, in her blue veil that was like a veil of rain. He had come up to her and tried to make her talk or dance; she had shrunk, quailed, shivered. She would not speak or look up. He put his thumb under her chin to make her raise her face, and at that Mal retched as if about to vomit and staggered where she stood. Hehum had interfered: "Lord Master ten Bal, she is untouched," she said, with the stern dignity of her position as Mother of Gods. Ralo laughed and withdrew his hand, saying foolishly, "Well, I've touched her now."

Within a few days an offer for her had come from the Bals. It was not a good one. She was asked for as a slave girl, as if she were not marriageable, and the barter was to be merely the produce of one of the Bal grain-plots. Given the Bals' wealth and the relative poverty of the Belens, it was an insulting offer. Alo and Bela refused it without explanation or apology, haughtily. It was a great relief to Modh when Bela told her that. When the offer came, she had been stricken. Had she seduced Bela away from Mal only to leave her prey to a man Mal feared even more than Bela, and with better reason? Trying to protect her sister, had she exposed her to far greater harm? She rushed to Mal to tell her they had turned down the Bals' offer, and telling her burst into tears of guilt and relief. Mal did not weep; she took the good news quietly. She had been terribly quiet since the wedding.

She and Modh were together all day, as they had always been. But it was not the same; it could not be. The husband came between the sisters. They could not share their sleep.

Days and festivals passed. Modh had put Ralo ten Bal out of mind, when he came home with Bela after a game at the ball courts. Bela did not seem

comfortable about bringing him into the house, but had no reason to turn him away. Bela came into the hanan and said to Modh, "He hopes to see you dance again."

"You aren't bringing him behind the curtain?"

"Only into the dancing room."

He saw her frown, but was not accustomed to reading expressions. He waited for a reply.

"I will dance for him," Modh said.

She told Mal to stay back in the sleeping rooms in the hanan. Mal nodded. She looked small, slender, weary. She put her arms around her sister.

"Oh Modh," she said. "You're brave, you're kind."

Modh felt frightened and hateful, but she said nothing, only hugged Mal hard, smelling the sweet smell of her hair, and went back to the dancing room.

She danced, and Ralo praised her dancing. Then he said what she knew he had been waiting to say from the moment he came: "Where's your wife's sister, Bela?"

"Not well," Modh said, though it was not for a Dirt woman to answer a question one Crown asked another Crown.

"Not very well tonight," Bela said, and Modh could have kissed him from eyes to toes for hearing her, for saying it.

"Ill?"

"I don't know," Bela said, weakening, glancing at Modh.

"Yes," Modh said.

"But perhaps she could just come show me her pretty eyebrows."

Bela glanced at Modh again. She said nothing.

"I had nothing to do with that stupid message my father sent you about her," Ralo said. He looked from Bela to Modh and back at Bela, smirking, conscious of his power. "Father heard me talking about her. He just wanted to give me a treat. You must forgive him. He was thinking of her as an ordinary Dirt girl." He looked at Modh again. "Bring your little sister out just for a moment, Modh Belenda," he said, bland, vicious.

Bela nodded to her. She rose and went behind the yellow curtain.

She stood some minutes in the empty hall that led to the sleeping rooms, then came back to the dancing room. "Forgive me, Lord Master Bal," she said in her softest voice, "the girl has a fever and cannot rise to obey your summons. She has been unwell a long time. I am so sorry. May I send one of the other girls?"

"No," Ralo said. "I want that one." He spoke to Bela, ignoring Modh. "You brought two home from that raid we went on. I didn't get one. I shared the danger, it's only fair you share the catch." It was a sentence he had clearly rehearsed.

"You got one," Bela said.

"What are you talking about?"

Bela looked uncomfortable. "You had one," he said, in a less decisive voice.

"I came home with nothing!" Ralo cried, his voice rising, accusing. "And you kept two! Listen, I know you've brought them up all these years, I know it's expensive rearing girls. I'm not asking for a gift."

"You very nearly did," Bela said, stiffly, in a low voice.

Ralo put this aside with a laugh. "Just keep in mind, Bela, we were soldiers together," he said, cajoling, boyish, putting his arm round Bela's shoulders. "You were my captain. I don't forget that! We were brothers in arms. Listen, I'm not talking about just buying the girl. You married one sister, I'll

marry the other. Hear that? We'll be brothers in the dirt, how's that?" He laughed and slapped his hand on Bela's shoulder. "How's that?" he said. "You won't be the poorer for it, Captain!"

"This is not the time to talk about it," Bela said, awkward and dignified.

Ralo smiled and said, "But soon, I hope."

Bela stood, and Ralo had to take his leave. "Please send to tell me when Pretty Eyebrows is feeling better," he said to Modh, with his smirk and his piercing glance. "I will come at once."

When he was gone Modh could not be silent. "Lord Husband, don't give Mal to him. Please don't give Mal to him."

"I don't want to," he said.

"Then don't! Please don't!"

"It's all his talk. He boasts."

"Maybe. But if he makes an offer?"

"Wait till he makes an offer," Bela said, a little heavily, but smiling. He drew her to him and stroked her hair. "How you fret over Mal. She's not really ill, is she?"

"I don't know. She isn't well."

"Girls," he said, shrugging. "You danced well tonight."

"I danced badly. I would not dance well for that scorpion."

That made him laugh. "You did leave out the best part of the mimei."

"Of course I did. I want to dance that only for you."

"Lui has gone to bed, or I'd ask you to."

"Oh, I don't need a drummer. Here, here's my drum." She took his hands and put them on her full breasts. "Feel the beat?" she said. She stood, struck the pose, raised her arms, and began the dance, there right in front of him, till he seized her, burying his face between her thighs, and she sank down on him laughing.

Hehum came out into the dancing room; she drew back, seeing them, but Modh untangled herself from her husband and went to the old woman.

"Mal is ill," Hehum began, with a worried face.

"Oh I knew it, I knew it!" Modh cried, instantly certain that it was her fault, that her lie had made itself truth. She ran to Mal's room, which she shared with her so long.

Hehum followed her. "She hides her ears," she said, "I think she has the earache. She cries and hides her ears."

Mal sat up when Modh came into the room. She looked wild and haggard. "You hear it, you hear it, don't you?" she cried, taking Modh's hands.

"No," Modh murmured, "no, I don't hear it. I hear nothing. There is nothing, Mal."

Mal stared up at her. "When he comes," she whispered.

"No," Mal said.

"Groda comes with him."

"No. It was years ago, years ago. You have got to be strong, Mal, you have got to put all that away."

Mal let out a piteous, loud moan and put Modh's hands up over her own ears. "I don't want to hear it!" she cried, and began to sob violently.

"Tell my husband I will spend this night with Mal," Modh said to Hehum. She held her sister in her arms till she slept at last, and then she slept too, though not easily, waking often, listening always.

In the morning she went to Bedh and asked him if he knew what people did about ghosts—people in the villages.

He thought about it. "I think if there was a ghost somewhere they didn't go there. Or they moved away. What kind of ghost?"

"An unburied person."

Bedh made a face. "They would move away," he said with certainty.

"What if it followed them?"

Bedh held out his hands. "I don't know! The priest, the yegug, would do something, I guess. Some spell. The yegug knew all about things like that. These priests here, these temple people, they don't know anything but their dances and singing and talk-talk-talk. So, what is this? Is it Mal?"

"Yes."

He made a face again. "Poor little one," he said. Then, brightening, "Maybe it would be good if she left this house."

Several days passed. Mal was feverish and sleepless, hearing the ghost cry or fearing to hear it every night. Modh spent the nights with her, and Bela made no objection. But one evening when he came home he talked some while with Alo, and then the brothers came to the hanan. Hehum and Nata were there with the children. The brothers sent the children away, and asked that Modh come. Mal stayed in her room.

"Ralo ten Bal wants Mal for his wife," Alo said. He looked at Modh, forestalling whatever she might say. "We said she is very young, and has not been well. He says he will not sleep with her until she is fifteen. He will have her looked after with every attention. He wants to marry her now so that no other man may compete with him for her."

"And so raise her price," Nata said, with unusual sharpness. She had been the object of such a bidding war, which was why the Belens had all but beggared themselves to buy her.

"The price the Bals offer now could not be matched by any house in the City," Alo said gravely. "Seeing we were unwilling, they at once increased what they offered, and increased it again. It is the largest bride-bargain I ever heard of. Larger than yours, Nata." He looked with a strange smile at his wife, half pride, half shame, rueful, intimate. Then he looked at his mother and at Modh. "They offer all the fields of Nuila. Their western orchards. Five Root houses on Wall Street. The new silk factory. And gifts—jewelry, fine garments, gold." He looked down. "It is impossible for us to refuse," he said.

"We will be nearly as wealthy as we used to be," Bela said.

"Nearly as wealthy as the Bals," Alo said, with the same rueful twist to his mouth. "They thought we were bargaining. It was ridiculous. Every time I began to speak, old Loho ten Bal would hold up his hand to stop me and add something to the offer!" He glanced at Bela, who nodded and laughed.

"Have you spoken to Tudju?" Modh said.

"Yes," Bela answered.

"She agrees?" The question was unnecessary. Bela nodded.

"Ralo will not mistreat your sister, Modh," Alo said seriously. "Not after paying such a price for her. He'll treat her like a golden statue. They all will. He is sick with desire for her. I never saw a man so infatuated. It's odd, he's barely seen her, only at your wedding. But he's enthralled."

"He wants to marry her right away?" Nata asked.

"Yes. But he won't touch her till she's fifteen. If we'd asked him he might have promised never to touch her at all!"

"Promises are easy," Nata said.

"If he does lie with her it won't kill her," Bela said. "It might do her good."

She's been spoiled here. You spoil her, Modh. A man in her bed may be what she needs."

"But—that man—" Modh said, her mouth dry, her ears ringing.

"Ralo's a bit spoiled himself. There's nothing wrong with him."

"He—" She bit her lip. She could not say the words.

Bela was keeping her from turning back to pick up the baby, jabbing his sword at her, dragging her by the arm, Mal was crying and stumbling behind them in the dust, up the steep hill, among the trees.

They all sat in uncomfortable silence.

"So," Alo said, louder than necessary, "there will be another wedding."

"When?"

"Before the Sacrifice."

Another silence.

"We mean no harm to come to Mal," Alo said to Modh. "Be sure of that, Modh. Tell her that."

She sat unable to move or speak.

"Neither of you has ever been mistreated!" Bela said resentfully, as if answering an accusation. His mother frowned at him and clicked her tongue. He reddened and fidgeted.

"Go speak to your sister, Modh," Hehum said. Modh got up, seeing the walls and tapestries and faces grow small and bright, sparkling with little lights. She walked slowly and stopped in the doorway.

"I am not the one to tell her," she said, hearing her own voice far away.

"Bring her here then," Alo said.

She nodded; but when she nodded the walls kept turning around her, and reaching out for support, she fell in a half-faint.

Bela came to her and cradled her in his arms. "Little fox, little fox," he murmured. She heard him say angrily to Alo, "The sooner the better."

He carried Modh to their bedroom, sat with her till she pretended to sleep, then left her quietly.

She knew that by her concern, by the nights she had spent with Mal, she had let him become jealous of her sister.

It was for her sake I came to you! she cried to him in her heart.

But there was nothing she could say now that would not cause more harm.

When she got up she went to Mal's room. Mal ran to her weeping, but Modh only held her, not speaking, till the girl grew quieter. Then she said, "Mal, there is nothing I can do. You must endure this. So must I."

Mal drew back a little and said nothing for a while. "It cannot happen," she said then, with a kind of certainty. "It will not be allowed. The child will not allow it."

Modh was bewildered for a moment; she had been wondering if she were pregnant; now she thought for a moment that Mal was pregnant; then she understood.

"You must not think about that child," she said. "She was not yours or mine. She was not daughter or sister of ours. Her death was not our death."

"No. It is his," Mal said, and almost smiled. She stroked Modh's arms and turned away. "I will be good, Modh," she said. "You must not let this trouble you—you and your husband. It is not your trouble. Don't worry. What must happen will happen."

Cowardly, Modh let herself accept Mal's reassurance. More cowardly still, she let herself be glad that it was only a few days until the wedding. Then what must happen would have happened. It would be done, it would be over.

She was pregnant; she told Hehum and Nata of the signs. They both smiled and said, "A boy."

There was a flurry of getting ready for the wedding. The ceremony was to be in Belen House, and the Belens refused to let the Bals provide food or dancers or musicians or any of the luxuries they offered. Tudju was to officiate. She came a couple of days early to stay in her old home, and she and Modh played at sword-practice the way they had done as girls, while Mal looked on and applauded as she had used to do. She was thin and her eyes looked large, but she went through the days serenely. What her nights were, Modh did not know. Mal did not send for her. In the morning, she would smile at Modh's questions about the night and say, "It passed."

But the night before the wedding, Modh woke in the deep night, hearing a baby cry.

She felt Bela awake beside her.

"Where is the child?" he said, his voice rough and deep in the darkness.

She said nothing.

"Nata should quiet her brat," he said.

"It is not Nata's."

It was a thin, strange cry, not the bawling of Nata's healthy boys. They heard it first to the left, as if in the hanan. Then after a silence the thin wail came from their right, in the public rooms of the house.

"Maybe it is my child," Modh said.

"What child?"

"Yours."

"What do you mean?"

"I carry your child. Nata and Hehum say it's a boy. I think it's a girl, though."

"But why is it crying?" Bela whispered, holding her.

She shuddered and held him. "It's not our baby, it's not our baby," she cried.

All night the baby wailed. People rose up and lighted lanterns and walked the halls and corridors of Belen House. They saw nothing but each other's frightened faces. Sometimes the weak, sickly crying ceased for a long time, then it would begin again. Mostly it was faint, as if far away, even when it was heard in the next room. Nata's little boys heard it, and shouted, "Make it stop!" Tudju burned incense in the prayer room and chanted all night long. To her the faint wailing seemed to be under the floor, under her feet.

When the sun rose the people of Belen House ceased to hear the ghost. They made ready for the wedding festival as best they could.

The people of Bal came. Mal was brought out from behind the yellow curtain, wearing voluminous unsewn brocaded silks, with golden jewelry, her transparent veil like rain about her head. She looked very small in the elaborate draperies, straight-backed, her gaze held down. Ralo ten Bal was resplendent in puffed and sequined velvet. Tudju lighted the wedding fire and began the rites.

Modh listened, listened, not to the words Tudju chanted. She heard nothing.

The wedding party was brief, strained, everything done with the utmost formality. The guests left soon after the ceremony, following the bride and groom to Bal House, where there was to be more dancing and music. Tudju and Hehum, Alo and Nata went for civility's sake. Bela stayed home. He and Modh said almost nothing to each other. They took off their finery and lay

silent in their bed, taking comfort in each other's warmth, trying not to listen for the wail of the child. They heard nothing, only the others returning, and then silence.

Tudju was to return to the Temple early in the morning. She came to Bela and Modh's apartments. Modh had just risen.

"Where is my sword, Modh?"

"You put it in the box in the dancing room."

"Your bronze one is there, not mine."

Modh looked at her in silence. Her heart began to beat heavily.

There was a noise, shouting, beating at the doors of the house.

Modh ran to the hanan, to the room she and Mal had slept in, and hid in the corner, her hands over her ears.

Bela found her there later. He raised her up, holding her wrists gently. She remembered how he had dragged her by the wrists up the hill through the trees. "Mal killed Ralo," he said. "She had the sword hidden under her dress. They strangled her."

"Where did she kill him?"

"On her bed," Bela said bleakly. "He never did keep his promises."

"Who will bury her?"

"No one," Bela said, after a long pause. "She was a Dirt woman. She murdered a Crown. They'll throw her body in the butchers' pit for the wild dogs."

"Oh, no," Modh said. She slipped her wrists from his grip. "No," she said. "She will be buried."

Bela shook his head.

"Will you throw everything away, Bela?"

"There is nothing I can do," he said.

She leaped up, but he caught and held her.

He told the others that Modh was mad with grief. They kept her locked in the house, and kept watch over her.


Bedh knew what troubled her. He lied to her, trying to give her comfort; he said he had gone to the butcher's pit at night and found Mal's body and buried it out past the Fields of the City. He said he had spoken what words he could remember that might be spoken to a spirit. He described Mal's grave vividly, the oak trees, the flowering bushes. He promised to take Modh there when she was well. She listened and smiled and thanked him. She knew he lied. Mal came to her every night and lay beside her.

Bela knew she came. He did not try to come to that bed again.

All through her pregnancy Modh was locked in Belen House. She did not go into labor until almost ten months had passed. The baby was too large; it would not be born, and with its death killed her.

Bela ten Belen buried his wife and unborn son with the Belen dead in the holy grounds of the Temple, for though she was only a Dirt woman, she had a dead god in her womb. ○

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THE WEREWIFE WONDERS ABOUT GENETICS

Watching the old beast
sparring with his sons,
teaching them by painful example
the ninety and nine ways
victory can become disaster,
teaching them
the Four Methods of Conciliation
(Attack, Attack, Counter-Attack
& Frontal Assault),
watching him pace
between the holes kicked in the wall
and the broken furniture
teaching them the difference
between compromise & surrender
("There is none!")
she wonders
if they will grow up to be men
or beasts.
And if there is a difference.

—William John Watkins

CAPTAINS OF INDUSTRY

Matthew Jarpe

Matthew Jarpe is a biochemist living in Massachusetts. In July 2000, his first story appeared in *Asimov's* and Samuel, his first child, was born. He belongs to a writers group that meets every month in the home of SFWA Grand Master Hal Clement. Mr. Jarpe divides his time between being a daddy, writing science fiction, and helping to develop new treatments for cancer.

1

The *Capitalist* was the fastest spaceship ever made by humans, and it didn't go anywhere. It orbited an unusually empty bubble of space around a black hole light years from any useful resource. Yet many considered it to be the center of the universe.

To an outside observer, the ship was shaped like a coin, less than a meter thick. At least that's what it would look like if an outside observer could see it. If you looked at the schematic diagram you'd see some weird twisted shape that could never hold together in flat space, but in the intensely curved spacetime around the black hole, the crazy topology protected the structure from powerful tidal forces. To the privileged industrialists living on board, the *Capitalist* was a cylinder, a few kilometers long and a few hundred meters across. The ship moved as close to the speed of light as anything made of matter ever could hope. And, again, it didn't go anywhere. That wasn't the point.

Sloan Lerner, who counted his years in the old Earth way at thirty-three, was by far the youngest CEO to have the privilege of locating his home office on the *Capitalist*. But, of course, he was born there. His father had just stepped off the merry-go-round to take up with a new wife and had left Sloan to look after the business and his mother, and, yes, in that order, while Lerner senior sprawled on some tropical beach somewhere and drew down the corporate account until his new time frame moved him out of the picture for good.

His fellow bosses liked to joke about Sloan behind his back. Silver spoon, wet behind the ears, that sort of crap. They liked to, but they didn't get much opportunity, because he was a hell of a lot better at running the company than his father had been. Lerner Interstellar was the fastest growing company headquartered on the *Capitalist*. He had grown and diversified the shipping business to include mining, bioengineering, manufacturing, and agriculture. He employed sixty million people on eight planets and fifty-odd space stations. The stock chart looked like an exponential function.

Not much material to joke about. Now he was even getting nods of respect from the others as he walked down the wood paneled hallway toward his office suite.

Millicent Danvers of Tri-Cluster smiled at him as she left her own office. "I hear you're going up against Seth," she said.

"Or he's going up against me," Sloan answered. He had no idea what she was talking about. He had learned a few lessons in business from his father, and the first was that you never let anyone know you weren't on top of things.

"You got guts, kid." Danvers shook her head and walked away.

Sloan didn't like to hear rumors flying around in these hallways. Things outside the ship happened too fast. It took good information and a steady nerve to run a business in this relativistic time frame. Sloan stepped up his pace, berating himself for not bringing his phone along for the fifteen minute walk to his office. Every step meant things were happening on the outside that he had no control over.

The accelerated time frame was more than just a nuisance, it was the whole idea behind the *Capitalist*. Physicists long ago had found that time was part of space, and that the two could not be separated. Businessmen had found out an equally important relationship, that time was money. Put those two laws together and you get the picture. Because to make money at the business of interstellar trade, you had to wait years, sometimes hundreds of years, to do a simple deal. You might have to wait generations to make any money. And the people who went into business were, not to put too fine a point on it, not interested in delayed gratification.

Back in the days of Sloan's grandfather, the bosses of interstellar businesses used to have themselves frozen and thawed out every, say, ten years or so to check on the status of their companies. Problem was two problems: one, the whole freeze thaw thing was bad on the organs, the brain in particular. Each time it took longer and longer to get up to speed, until it eventually became clear to the boss and everyone else that the grey matter was turning to bean dip in there. Two, with the CEO in deep freeze, what was to stop the help from making some creative financial arrangements? Even the computers got in on the grab. Jesus Christ, when you can't even trust a robot not to embezzle, best not to take the long sleep.

So the physicists, of all people, had a solution. When you hang out deep inside a steep gravity well, you get to watch time go by in the rest of the universe a lot faster. You have your agents buy a load of ammonia somewhere out near Altair, ship it to an aggy planet around Tau Ceti, pick up some grain and schlep that back to the hive colonies of Sol. That's thirty-six years of crawling along at an agonizing pace of 250,000 kilometers per second, but only a long lunch on the *Capitalist*.

The first generation of CEO's to take offices on the *Capitalist*, Sloan's father among them, loved to watch their empires grow from this godlike vantage point. But, unlike the gods, they couldn't always keep up with everything the little people were up to. Sloan sometimes wished he could leave the ship for a little while, just to catch up on the details, but the logistics of getting on and off a near lightspeed satellite were daunting. His office was just around the next corner. Tony Arbequest moved to block his path. "What's this deal between you and Seth?"

"Too early to say," Sloan said, and neatly sidestepped. Arbequest was on his way out. He couldn't pay the rent, and would have to go back on the

clock unless he could come up with a decent cash flow position. Sloan could afford to ignore him. But this rumor was bothering him. He didn't want to tangle with Seth Leibowitz, not now, not ever. His father and Seth had been working together, and his father had ended up with Seth's knife in his back. He dodged another CEO with what looked like a question on his mind, and ducked into his office.

Danny sat behind the ops desk to his right. He gave Sloan a worried look but said nothing. Margie stood up from behind the reception desk and smiled.

"Good morning, Mr. Lerner. There's an urgent message from C&P. It's the first one on your monitor. Is there anything . . ."

"Nothing, thanks, Margie. Morning, Danny." Sloan didn't wait to hear the answer. He closed the door to his office behind him. First message, Colonization & Personnel, Planet HE-47/J, the one with the petroleum. Something about the deed, right of colonization, and a prior lien. What prior lien?

He slowed down and read the message more carefully. Information Services had uncovered a flight pattern that put a transport en route to Planet HE-47/J, said transport leased to The Sculptor Group. Seth Leibowitz, in other words. His transport papers claimed a right to colonize the planet, and the space transit authorities had let it through. Legal had checked the deed and had confirmed that there was in fact a lien on the planet, a left-over from the ruined deal between Lerner Interstellar and Sculptor, under the tenure of Lerner senior. There had been a civil trial in lower court, then an appeal in Interstellar Court that had overturned one of the two claims of the suit. As it stood, after two years of legal wrangling, both companies had equally valid right of colonization of the planet. This had all happened since Sloan had left his apartment on his way to the office. It would have to happen on the day he forgot his phone.

Sloan checked the time frame in standard binary. The days on his display flipped by at a speed of one per second, as always. C&P had sent a colony ship to HE-47/J and it was supposed to arrive in just seventy years. Sculptor's flight plan showed their ship arriving just a year later. His people would just have time to unpack the colony and fire up the factories in that amount of time.

HE-47/J was a dead world, no life left on the surface but a lot of complex organic stuff in the ground. Easy to build on, but tough to survive. A hot, sandy, windy planet. Tough enough to get things going without another colony competing for resources.

Sloan called up his deal-tracker program, the one that could keep straight the calculations of time and distance and all of the other complications that came with the running of an interstellar business. HE-47/J was about fifty light years away from the *Capitalist*, give or take. If he sent the message in the next couple of hours, it would reach the transport ship just in time for him to tell it to turn around. But he couldn't afford to give up that petroleum. Seth Leibowitz had the same window, give or take a few minutes, but he probably wouldn't back down either. What would these people do once they ran into each other? If he couldn't convince Seth to call off his ship, he'd soon find out.

"Sloan, Seth Liebowitz here. Hey, kid, it looks like our legal departments have been busy on the clock this morning. You got time to sit down?"

No way. There was no way Sloan was meeting with Seth in person at this

point. He was still trying to get all the information, and his off-the-clock legal team was slogging through years of trial transcripts that were still uploading. "Kind of busy, old man, how's . . ." he pretended to check his calendar . . . "never?"

"Aw, hell, Sloan, let's cut the crap. We've got two colonies about to land on one goddamned planet. You know that can't work. There ain't enough water on that dustbowl for one. We've got to work something out."

"Okay, how about you tell your people to turn around and we put this whole thing behind us?"

"Now kid, you know that isn't going to happen. Your old man used that planet as collateral in a legally binding arrangement, and he defaulted. I'm not just going to walk away from forty trillion barrels of crude oil. Look, now this is not a threat, it's just a simple statement of fact. Lives are going to be lost over this."

"What the hell are you talking about?"

"I'm talking about war, young man. Something you, obviously, know nothing about. My people are not going to tolerate the presence of your people on that planet. Your employees are going to have a serious problem on their hands. Remember, this is not a threat. This is going to happen. I'm just telling you straight out."

"My people are ready to handle that contingency," Sloan said. As he said it, he pulled up the company manual and had it search out the S.O.P for self-defense.

"What do you got on that transport, kid? Bunch of Drabs? It is Drabs, isn't it? You cheap bastards. You know who I got to colonize that sand dune? Bedouins. You heard of Bedouins? They're warlike people, indigenous to Earth's Sahara. They're tough, and they're bred to survive in just the sort of conditions we got down there on, what is it, HE-47/J? What the hell kind of a name is that for a planet? You people got no imagination."

And Seth, for all of his faults, did. That was something everyone knew. While Lerner Interstellar populated every planet it owned with a quiet and sturdy people that was made up of every race of old Earth blended together, Sculptor went out of its way to match the people with the terrain. If they had a snowball, they found some Inuits to live there. If it was a tropical jungle, they scoured the Amazon rain forest for the few remaining tribes and offered them a trip to the stars and a great benefits package.

But Sculptor was already a huge company, and Seth could afford to do things in style. Lerner Interstellar's mission statement was to create a large, multi-functional corporation without becoming distracted by extravagance. And the Drabs fit right into that business model. They had a strong work ethic, they weren't very excitable and rarely caused trouble. And they loved their company.

"You'd be surprised at what my people are capable of, Seth. Don't consider the outcome of a war to be a foregone conclusion."

"Bullshit, Sloan. You and I know that your Drabs won't last five weeks in a fight against my Bedouins. They can't even take a shit without consulting the company manual."

Speaking of the manual, Sloan found the chapter on self-defense and his heart sank as he read the instructions. They were technically workable. Everything you would want to know from how to target an enemy bunker to how to prepare a unit of field rations was covered. In fact, it was the degree of detail that concerned him. The Drab soldiers would stand exactly

where the company manual told them to stand while the Bedouins ran circles around them. And no one had thought to send an innovator along with the colony. They'd be on their own. He had to find another way to bluff his way out of this one.

"I see two ways this can go, Seth. Either we just let these people land on the planet and fight it out. See who wins, see who's liable for all those deaths on both sides, see what the courts have to say about a company who sends warriors to a planet without clear right of colonization, knowing there's a legitimate colony on the way. Or, second choice, you can call your people and tell them to turn back before anyone gets hurt. I'd even be glad to compensate you for agreeing to settle this out of court. I'll send you a list of assets I think are quite generous in exchange for what is, at best, a dubious claim of right of colonization. Look it over. You have two hours. Your choice, Seth. Now, if you'll excuse me, I have a staff meeting."

2

The company manual was uncharacteristically vague on the topic of war. Sub-director Bodansky could find everything he needed to know about preparing for war, from the proper methods of training an army to the access codes that would order the robot factories to make an impressive collection of lethal weapons. What was unclear was the objective. "When a colony is threatened with violent attack, it may be necessary to conduct war as an advanced means of defense."

Bodansky had already gone through the early protocols. He had armed the frontier, formed a militia, sent out patrols, and created defensive earthworks with artillery support. And still the Bedouins killed his people. He had lost over three thousand FTE's since his Colonization Team had landed on Planet HE-47/J. His team had not met his objective to build and operate one hundred oil wells, and had certainly not managed to meet the export quota handed down from the home offices of Lerner Interstellar. His project was failing, and now even the company manual was no help.

What was the objective? The problem was, he knew how to start the war. The manual told him that. But once you start, how do you stop?

"I thought we had agreed on a campaign of war," Team Leader Miller said. She looked around at the other team leaders as if to request backup. "Isn't the company manual fairly explicit on this?"

"The company manual tells us how to go about starting a war, yes," Sub-director Bodansky answered. "But I'm still unclear on the objective. I've gone to supplementary materials to try and clear it up."

"Supplementary materials?" Miller was incredulous. "What do you think you are, an innovator?"

That remark stung. Bodansky had risen to the position of Sub-Director as a result of years of hard work and loyal service. His creativity had never been officially recognized, because he had never let it show. When he had an imaginative solution to a problem, he held it in check and went with standard operating procedure. That had got him this far in the company, but deep down he knew he could have done better. Could have been doing better all along. He had ideas. He was an innovator, only no one knew it. And Team Leader Miller was treating the very idea as though it were a joke.

"We weren't budgeted an innovator for this colonization project," Bodansky answered. "But this situation clearly calls for something beyond what the company manual can provide."

"I'm with Miller on this, Bodansky," Team Leader Markos said. "Trying to turn yourself into an innovator is ill advised. You just weren't trained for it. We should stick to the manual and go make war with these people."

"The objective is fairly obvious," Miller added.

"Then state it for me," Bodansky demanded. "Just tell me this, as simply as you can: How do you know when you're finished?"

"When you kill the enemy. Of course. Bodansky, that's the whole point."

"How many do we have to kill? All of them?"

"Well . . ."

"The babies?"

"Oh, no, of course . . ."

"The children? What if they grow up and want to fight? Or tell me this, do we kill the support personnel? The factory workers?"

"I shouldn't think that would be necessary," Miller said, clearly uncomfortable by this point. "I think the point is to get them to surrender."

"Do you know when to surrender? The manual is actually quite clear that we should surrender when we are clearly outmatched. But the Bedouins got to this planet only a year or so after we did, we both have the same number of people, the same technology, roughly. We can't be sure we can win until the last one of us kills the last one of them. This project is open ended. Without a focused objective, the war could go on until we're all dead and there's no one left to bury us. I don't know anything about making war, but I do know that you never start a project without a clear idea in mind of how to stop it."

Miller grimaced and nodded her head. "You're right, Bodansky. We can't start a project without an exit strategy. We've been going at this all wrong. What were you saying about supplementary materials?"

The other team leaders exchanged nervous looks. Their grandmothers and grandfathers had seen distant worlds, had crossed the gulf of interstellar space, had built a mighty company with hard work and good leadership. But they had never done what this team was about to do. Beyond the company manual was a scary landscape of ideas and imagination, and this was where the gateway to that land opened. Bodansky studied their faces, and he saw fear mixed with the barest hint of understanding. He knew that his own face had gone through that transition days ago, and he knew now that they were about to realize the same things he had. He was silent while they thought it over. He had led them this far, but they had to take the next steps on their own.

Markos stared down at his company manual, a display showing a standard advance column for infantry with armor support. He looked up and switched the screen off. "All right," he said. "Tell us what you've found."

"I've found a great deal of supplementary information on the history of war on old Earth," Bodansky told them. "It's too much for me to read, so I'd like to assign sub-committees to cover each of the basic areas."

Team Leader Miller picked up the packet of information Bodansky pushed in front of her. "The Hundred Years' War? That sounds terribly inefficient."

"Diplomacy? There's nothing about diplomacy in the company manual."

Director Brennerman frowned down at the proposal on the desk in front of him. "Your goals statement said you were going to pursue a campaign of warfare. What happened to that?"

"I saw a better way," Bodansky told him. "I reasoned that . . ."

"Wait a minute, you reasoned?"

"Just listen to my argument. The war can still be initiated. We haven't lost any time. But listen first."

"All right, go ahead." The director was starting to get that worried look he had seen on the faces of the team leaders. It went away as Bodansky spoke, just like it always did. His people did have imagination, they could use their minds if they had to. It hadn't been lost. The company called them Drabs, presumably because of their mud-colored skin, but also because of the way they thought. But Bodansky had seen the intelligence in those olive skinned faces, and the spark of imagination behind those dull brown eyes.

"The objective of war in the company manual is not clear. The team leaders and I delved into supplementary material, history lessons, mostly, to gain a clearer understanding of the goals. What we found was that war was a means to force your enemy to listen to diplomacy. Once you make them realize that fighting is costly, you can convince them that it is in their best interests and yours to pursue a peaceful alternative."

"But we've already tried talking to them," the director said. "They won't listen."

"We've approached them on business terms, as if we were negotiating a contract. The problem is, we had nothing to offer them. Now we do."

"And what is that? We still have nothing they want."

"They want peace," Bodansky said.

"No they don't. If they wanted peace they wouldn't be attacking us."

Bodansky smiled. "Rather, I should say, they will want peace once they hear what I have to say. You see, our people are not a war-like race. We're good workers and we get the job done, but we don't like fighting. When we take on an unpleasant task we accomplish our objectives as efficiently as possible. Our company manual gives us access codes to get our factories to make weapons. According to the manual, we are to make the weapons in a certain order, from least destructive to most, as they are needed. I'm sure the Bedouins have a similar set of guidelines. But they like to fight one-on-one, so they like the small weapons. We don't like this fighting, and we don't see this as the most efficient way to proceed. We feel that it would best achieve the objectives if we just made the most destructive weapon first, use it to eliminate the enemy once and for all, and continue with the work we were sent here to do."

"And suppose they also make their most destructive weapon?" the director asked.

"Then we all die and nobody gets any work done."

Bodansky could tell that the director was paging through the company manual on his desktop reader. He couldn't see it on the other side of the desk, but he knew the pattern of a man desperately searching the index for the answers to unanswerable questions.

"And you and your team came up with this idea from supplementary materials, you say?"

"There's nothing about this in the manual, sir."

"If it's such a good idea, then why wouldn't it be in there? This manual was written by smarter people than us." The director glanced nervously up

at Bodansky, then quickly back to the screen, still stubbornly silent on the topic of enforceable peace.

"The manual can't foresee every situation, Director Brennerman. Sometimes we have to revise it as we go."

The director looked up from the screen at Bodansky, then hung his head in resignation. Bodansky knew exactly how he felt. The company manual had never let them down before. Only the innovators were trained to think outside the box, to revise the text as needed, to create instructions out of thin air. And there was no innovator on planet HE-47/J.

"Try it, Bodansky, but keep the factories ready anyway. We may need those big weapons, after all." As he stood to leave, Bodansky saw the director paging through the index again. The frantic clicking steeled his resolve. He would show Brennerman and the home office that even though this project had not been budgeted an innovator, it had gotten one anyway.

3

"Message from HE-47/J," Danny said as Sloan walked through the office on his way back to his apartment. It had been a long day. Legal had still not sorted out the mess of rulings and counter rulings. C&P had no idea how the Drabs would fare in a war with the Bedouins. And Seth had not blinked. He had not been interested in the list of space stations and mining operations that Sloan had tried to entice him with, had in fact sent a similar insulting list to Sloan for the same purpose, and he had not sent the message in time to turn back his colony ship. Neither had Sloan. He could take grim satisfaction that in the ages old battle between youth and experience, between growth and value, Sloan Lerner had not let his side down. He had not surrendered. Little good that would do to the employees whose lives would be lost, knowing nothing of the meaning behind their sacrifice.

"They've arrived? The colony has landed on the planet?" Of course, the message was delayed by the speed of radio waves, and so the ship had actually landed a long time ago, but Danny knew what he meant.

"Yes, the feed is spooling through now. They've encountered the Sculptor colony."

"The Bedouins."

"Yes, they've been attacked, they attempted defensive measures but were not successful."

The fact that all of this had happened fifty years ago did nothing to lessen the tension. The events of the years following the colony landing were spooled out in the continuous status feed from the real time world in minutes.

Sloan rounded the desk and began reading the feed for himself. "Campaign of warfare, Sub Director Bodansky in charge. . . . Wait a minute, diplomacy? Back that up, Danny."

Let's see, supplemental materials, history of war, blah blah blah. Now here: "Sub Director Bodansky has determined that a campaign of warfare is inefficient and counterproductive. He has requested the factory robots to construct thermonuclear warheads, cruise missiles, and mobile launch vehicles. He has informed the Sculptor colony of his plans, and has urged them to reconsider their attacks."

Now here was the diplomacy part: "The Bedouin tribe, seeing the danger of a nuclear conflict to all parties concerned, has agreed to a joint coloniza-

tion effort. The colony is requesting retroactive approval for the establishment of a spin-off corporation comprised of personnel from the Sculptor Group and Lerner Interstellar. The purpose of the new corporation is to provide environmental support for the Sculptor and Lerner Interstellar drilling operations. With resources thus pooled, both colonies have surpassed projected productivity milestones."

"I'll be damned," Sloan muttered. "Get Seth on the phone." Things had worked out in spite of the leadership on the *Capitalist*. It was a humbling experience. What he and Seth Leibowitz had been unable to do, this Bodansky had done. It would have been appropriate to reward him, but he'd already be long since dead by the time the message got to the planet.

"Sloan," Seth's voice said on the speaker phone. "I imagine you're seeing the same news I am. It looks like we're in business together."

"Keep your pants on, Seth, this little spin-off company is barely big enough to get a line in our earnings report. I've got desk blotters that are worth more to me."

Seth laughed. "You got a lot to learn, kid. Hell, I suspect we all do. We like to play at being gods here, but without our little people scurrying around out there in the real world, we've got nothing. Our loyal minions on planet HE-47/J found a way to get their heads together. Next time, I hope you take a page from this Bodansky fellow of yours. And did you notice, they've agreed to rename the planet? We're supposed to call it Sadiq-amal from now on."

"What the hell is that supposed to mean?"

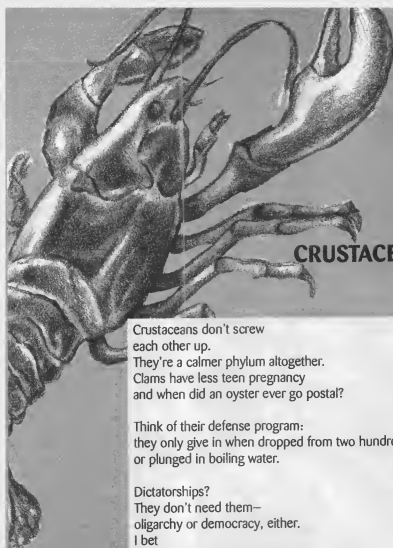
"It's Arabic, kid. Means something like 'friendly co-workers.'"○

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CRUSTACEANS

Crustaceans don't screw
each other up.
They're a calmer phylum altogether.
Clams have less teen pregnancy
and when did an oyster ever go postal?

Think of their defense program:
they only give in when dropped from two hundred feet
or plunged in boiling water.

Dictatorships?
They don't need them—
oligarchy or democracy, either.
I bet
they don't even have weird cults.

I'd love to be a crustacean.
Wouldn't you?
What grand stability.

Their space program
is on hold.

—Mary A. Turzillo



Illustration by Mark Evan

Before becoming a full-time writer, Paul McAuley worked as a researcher in biology in various universities, including Oxford and UCLA, and was a lecturer at St Andrews University. His novels and short stories have won the Philip K. Dick, Arthur C. Clarke, John W. Campbell, Sidewise, and British Fantasy Society Awards. His latest books are *The Secret of Life* and *Whole Wide World*. He lives in North London.

THE PASSENGER

Paul McAuley



The sky was full of ships. Sturdy little scows that were mostly motor; lumpy intrasystem shuttles, the workhorses of space; the truncated cones of surface-to-orbit gigs; freighters that, stripped of their cargo pods, looked like the unclad skeletons of skyscrapers; even an elegant clipper, a golden arc like the crescent moon of a fairy-tale illustration. More than a hundred ships spread in a rough sphere a thousand kilometers in diameter, in the Lagrangian point sixty degrees of arc ahead of Dione. All of them hulks. Combat wreckage. Spoils of war waiting to be rendered into useful components, rare metals, and scrap.

From the viewpoints of the battered hab-modules of the wrecking gangs, hung in the midst of this junkyard Sargasso, four or five ships were always visible, framed at various angles against starry space. Only a few showed obvious signs of damage. There was a passenger shuttle whose cylindrical lifesystem had been unseamed by carefully placed bomblets, a kamikaze act of sabotage that had killed the fleeing government of Baghdad, Enceladus. There was a freighter wrecked by a missile strike, its frame peeled back and half-melted, like a Daliesque flower. A dozen tugs, converted into singleship fighters, had been drilled by X-ray lasers or holed by smart rocks. But most were simply brain dead, their cybernetic nervous systems zapped by neutron lasers, microwave bursts or emp mines during the investment of the Saturn system. Salvage robots had attached themselves to these hulks and pushed them into low-energy orbits that had eventually intersected that of Dione. Their cargo pods had been dismantled, the antihydrogen and antilithium had been removed from their motors, and now, two hundred days after the end of the Quiet War, they awaited the attention of the wrecking gangs.

The men and women of the gangs were all outers recruited by Symbiosis, the Earth-based transnat that had won the auction for salvaging and rendering these casualties of the Quiet War. They were engineers, General Labor Pool grunts, and freefall construction mechanics on thirty-days-on/thirty-days-off shifts under minimum wage contracts, and pleased to get the work; the Quiet War had wrecked the economy of the Outer System colonies, and seventy percent of the population depended upon the charity of the victorious Three Powers Alliance.

Maris Delgado, foreperson of Wrecking Gang #3, was supporting her mother and father, and her brother and his family back in Athens, Tethys. Every cent of her wages, after deductions, went to them. Maris was a practical, gruff, level-headed woman. She preferred to put her faith in machines rather than people. You could always flange up a rough solution to a machine's problems, but people were unfathomable and all too often untrustworthy. Her approach to running her gang was pragmatic: do what Symbiosis asked, no more and no less. Her family depended upon her, and she wanted to get the job done with the minimum of fuss. She took no part in the gossip and rumors the wrecking gangs exchanged by clandestine laser blink whenever they were out of the line-of-sight of the Symbiosis supervisor's ship. She poured scorn on the rumors of ghosts and hauntings, of curses worked by dying crews, of hatches mysteriously locked or unlocked, machinery suddenly starting up or breaking down. She ridiculed the vivid stories that Ty Siriwardene, the youngest member of her gang, liked to conjure up, told him that the last thing you needed on a job like this was an imagination.

Not even on their latest assignment, which was a shuttle that Maris had helped to build a couple of years before the war, when she had been working in the orbital shipyards of Tethys. Ty said that the coincidence was spooky; Maris said that it was ridiculous to make anything of it. She'd worked fifteen years at the yards—all her working life. It was a statistical inevitability that sooner or later she'd find herself taking apart a ship that she had once helped assemble, and she was determined to treat it like any other.

Maris did the initial survey of the hulk with Somerset. It was grossly intact, and its lifsystem still pressurized; the only potential problem was the thick black crust growing around the motor, a vacuum organism that was probably subsisting on water vapor leaking from the attitude-control tanks. Somerset, who had been a data miner before getting religion, plugged a slate into the shuttle's dead computer and pulled the manifest from the memory core. The shuttle had been carrying a single passenger and miscellaneous agricultural supplies; it seemed likely that the vacuum organism had escaped from one of the cargo pods before they had been removed.

For once, Maris and Somerset didn't have to search for the crew; the Symbiosis workers who had uncoupled the cargo pods and decommissioned the motor had already done that. The three bodies, still wearing sealed pressure suits, were huddled together in an equipment locker around some kind of impedance heater lashed up from cable and an exhausted fuel cell. The locker, the heater, and the p-suits had been the crew's last stand against the inevitable after the shuttle's systems had been fritzed by an emp mine and the stricken lifsystem had cooled to minus two hundred degrees centigrade. One by one, they had succumbed to hypothermia's deep sleep, and their corpses had frozen solid.

Watched by one of the half-dozen drones that for some reason were floating about the lifsystem, Maris and Somerset identified each of the bodies, collected and documented their personal effects, and sealed them into coffins that Symbiosis would with impersonal charity deliver to surviving relatives. They were one body short—the passenger. Maris assumed that the woman had wandered off to die on her own in some obscure spot not discovered by the Symbiosis workers; the wrecking gang would find her frozen corpse by and by, when they stripped out the lifsystem.

Once the coffins had been sent on their way, the other two members of the wrecking gang came aboard. They rigged lights and a power supply, collected drifting trash, vented the lifsystem, and generally made the hulk safe, so that they could begin the second stage of the salvage operation, stripping out gold and silver, iridium and germanium, and all the other rare metals from the shuttle's control systems.

It was Ty Siriwardene who noticed that the shuttle's foodmaker had been dismantled, and that its yeast base block was missing. He told Maris about it at the end of the shift, back in the hab-module; she suggested that it couldn't be due to one of his famous ghosts, because it was well known that ghosts didn't eat.

"*Something* took the stuff," Ty said stubbornly. "I'm not making this up."

He was a raggedy young man, scrawny and slight in his grubby blue suit-liner, thick black tattoos squirming over his shaven scalp. He chewed gum incessantly; he was chewing it now, a tendon jumping on his neck, as he locked eyes with Maris.

"Maybe the crew ate the yeast because the maker couldn't synthesize food without power," Maris said.

Ty popped gum. "If they just wanted the yeast, why did they dismantle the maker? And why would they have eaten the yeast when they hardly touched the reserves of food paste in their suits?"

"They preferred yeast," Maris said curtly. She was tired. She had been working for twelve hours straight. She was looking forward to a shower and a long sleep. She didn't have time for Ty's spooky shit. He wanted her to contradict him, she realized, so that he could keep his silly notions alive in a pointless argument. She said, "We've got just one week left before we're all rotated rockside. Let it go, Ty, unless you want to write up a report for Barrett."

Ty didn't write it up, of course. The supervisor, James Lo Barrett, was considered a joke amongst the wrecking gangs: an inflexible bureaucrat who was working off some kind of demerit at this obscure posting, an incomer who hardly ever left his ship, who had no idea of the practical difficulties of the work. But Ty didn't let it go, either. The next day, mid-shift, he swam up to Maris and pulled a patch cord from his p-suit's utility belt. Maris sighed, but took the free end of the cord and plugged it in.

"Something's screwy," Ty said. "I was outside, checking the service compartment? Turns out all the fuel cells in the back-up power system are gone."

"The crew moved them inside after their ship was crippled," Maris said. "We found one cell right by their bodies."

"Yeah, but where are the *other* three?"

"They'll turn up," Maris said. "Forget it, and get back to work."

They were floating head-to-head in the narrow shaft that ran through the middle of the shuttle's tiny lifesystem, where Maris was feeding circuitry into the squat cube of a portable refinery that boiled off metals and separated and collected them by laser chromatography. Ty's gaze was grabby and nervous behind his gold-filmed visor. He really was spooked. He said, "You don't feel it? It's not just that something weird happened here. It's as if something's still here. A presence, a ghost."

"That would be Barrett. You know he's always on my tail to keep you guys on schedule. We have fifteen days to strip this hulk. If we fall behind, he'll dock our pay. Can you afford that, Ty? I can't. I have people who depend on me. Forget about the fuel cells. It's one of those mysteries that really isn't worth thinking about. It's nothing. Let me hear you say that."

"It's *something*," Ty said, with a flicker of insolence. He pulled the patch cord, spun head-over-heels, and shot away down the long corridor.

"And another thing," Maris said over the common radio channel, as Ty did a tuck-and-turn and pulled himself through a hatchway, "don't fuck around with any more drones. Barrett called me up a couple of hours ago, said he thought you'd done something to one of them."

"I don't like being watched while I work," Ty said.

"What did you do, Ty?"

"Glued it to a bulkhead. If Barrett wants to spy on me, he can come out and unglue it himself."

Ty wouldn't give up his idea that something was haunting the shuttle. Later, Maris caught him plugged into a private conversation with Bruno Peterfreund, the fourth member of the wrecking gang. They had just spent a couple of hours combing through the shuttle's lifesystem, and presented her with an inventory: the com module gone; pumps and filters from the air conditioning dismounted; sleeping bags and tools missing.

"Something took all this stuff," Ty said, "and made itself a nice cozy nest."
 "I think he's right, boss," Bruno said. "The stuff, it is not floating around somewhere. It's gone."

"The shuttle was zapped right at the beginning of the war," Maris said. "Nothing could have survived out here for three hundred days."

"Nothing human," Ty said. "It's a spook of some kind for sure. Hiding in the shadows, waiting to jump our asses."

Maris told the two men to get back to work, but she knew this wouldn't be the end of it. Ty and Bruno had wasted precious time chasing a ghost that couldn't possibly exist. They had fallen behind on the job.

Sure enough, Barrett called her that evening. He'd checked her day log, and wanted to know why her gang were still refining rare metals when they should have started to dismount the fusion plant. Maris wasn't prepared to expose her crew to Barrett's acid ridicule, so she flat-out lied. She told him that the calibration of the refinery had drifted, that there had been cross-contamination in the collection chambers, that she had had to run everything through the refinery all over again.

"I don't want to fine you," Barrett said, "but I'm going to *have* to do it all the same. You've gotten behind, Maris, and I can't be seen to favor one gang over another. It's nothing, just 30 percent of the day's pay, but if your gang don't have the fusion plant dismounted by the end of tomorrow, I'm afraid that I'll be forced to invoke another penalty."

James Lo Barrett, the smug bastard, giving her a synthetic look of soapy sympathy. He had a fleshy, pouched face, a shaven head (even his eyebrows were shaved), and a pussy little beard that was no more than a single long braid hung off his chin and wrapped in black silk thread. He looked, Maris thought, like a fetus blimped up by some kind of accelerated growth program. He was sitting at his desk, at ease in the centrifugal gravity of his ship in a clean, brightly lit room, with real plants growing on a shelf behind him and a mug of something smothered in his podgy hands. Coffee, probably—Maris thought she could see steam rising from it. She hadn't had a proper hot drink or meal in twenty days; the hab-module's atmosphere was a nitrox mix at less than half an atmosphere, and water boiled at seventy degrees centigrade. It stank too, because its air scrubbers didn't work properly; its joints needed careful monitoring because they were prone to spring leaks; its underpowered electrical system was liable to unpredictable brown-outs and cut-offs; it had a low grade but intractable black mold infection; the motors and fans of its air conditioning thrummed and clanked and groaned in a continual dismal chorus. But it was infinitely better than sitting rockside, subsiding on the meager charity of the Three Powers Occupation Force and enduring the random sweeps of its police. It was work, and work was what Maris lived for, even if she had to deal with people like Barrett.

She'd met him just once, at the start of her contract. He'd made a big deal about coming out to the hab-module to meet the new wrecking gang, had a clammy handshake, grabby eyes, and smelled of eucalyptus oil. He'd tried to convince her then that he was on her side, that he thought outers were getting a tough break. "The war is over," he'd told her. "We should draw a line under it and move on. There are tremendous possibilities out here, vast resources. Everyone can benefit. So don't think of me as the enemy, that's all in the past. Deal with me like you would anyone else, and we'll get along just fine."

Maris decided then that although she had to work for him, he couldn't

make her pretend to like him. She said now, direct and matter-of-fact, "We'll get back on schedule. No problem."

"Work with me, Delgado. Don't let me down."

"Absolutely," Maris said. Her job would have been so much easier if Barrett had been a tough son of a bitch. Maris could deal with sons of bitches—you always knew where you were with them. But Barrett pretended that he was not responsible for the authority he wielded, pretended that punishing his crews hurt him as much as it hurt them, demanding their sympathy even as he sequestered money that was needed to feed starving children. His spineless mendacity made him a worse tyrant than any bully.

"If there's a problem," he said, "you know I'm always here to help."

Yeah, right. Maris knew that if there really *was* a problem, he'd get rid of her without a qualm. She gave her best smile, and said, "The refinery threw a glitch, but it's fixed now. We'll get on top of the schedule first thing."

"That's the spirit. And Delgado? No more games with my drones."

Wrecking Gang #3's hab-module was nothing more than two stubby, double-skinned cargo pods welded either side of a central airlock, like two tin cans kissing a fat ball bearing. Maris sculled from the workspace cylinder, with its lockers and racks and benches, through the spherical airlock, into the living quarters. Ty glanced up from his TV; he was an addict of the spew of reworked ancient programs pumped out by autonomous self-replicating satellites in Saturn's ring system. Half hidden by the flexing silvery tube of the air ducting, Bruno Peterfreund, his long blond hair coiled under a knitted cap, was painstakingly scraping mold from a viewport.

Maris told the two men the bad news. She gave it to them straight. She didn't mention their sudden obsession with missing fuel cells and the rest; she let the inference hang in the air. "You guys will start dismantling the fusion plant," she said, "and once Somerset and I have finished up metal reclamation, we'll come and give you a hand. We'll start early, finish late. Okay?"

"Whatever," Ty said, affecting indifference but not quite daring to meet Maris's fierce gaze.

"That won't interfere with your social plans, Bruno?"

"Nothing I can't put off, boss." Bruno was a stolid, taciturn man of thirty-five, exactly the same age as Maris, a ship's engineer from Europa who had been stranded in the Saturn system by the war. He had spent more than a hundred days in a forced labor camp, helping to rebuild wrecked agricultural domes. Now that the Three Powers Occupation Force had declared "normalization" throughout the Outer System, and the embargo on civilian travel had been lifted, he hoped to earn enough from salvage work to pay for his ticket home. He had a round, impassive face and dark watchful eyes that didn't miss much; lately, Maris had caught him checking out her trim whenever he thought she wasn't looking. He was lonesome, she thought, missing the family he hadn't seen for almost a year. If he hadn't been married, and if they hadn't been working together, she might have responded; as it was, by unspoken agreement, they kept it at the level of mutually respectful banter.

"We'll make up the time," Maris told the two men. "I know you guys can work hard when you have to. Where's Somerset? Gardening?"

"As usual," Ty said.

Somerset was cocooned in a sleeping bag in a curtained niche at the far end of the chamber, eyes masked by spex, ringed fingers flexing like pale sea plants.

"Hey," Maris said.

Somerset pushed up the spex and turned its calm, untroubled gaze toward her. Like all neuters, its age was difficult to estimate; although it was thirty years older than Maris, and its spiky crest of hair was as white as nitrogen snow, its coffee-and-cream skin had the smooth, unlined complexion of a child. It was a member of some kind of Buddhist sect, and all of its wages went to the refugee center run by its temple. It owned nothing but a couple of changes of clothes, its p-suit, and its garden—a virtual microhabitat whose health and harmony were, according to the precepts of its faith, a reflection of its spiritual state.

Maris said, "How's everything growing?"

Somerset shrugged and said dryly, "You don't have to attempt pleasantries, Maris. I will do my part."

"You heard what I told Ty and Bruno."

"I thought you were quite restrained, considering the trouble they have caused."

"I want to know just one thing," Maris said. "I want to know if this is some kind of joke on me. If you're all winding me up because I helped build the ship, and I've bored you to death about why I don't believe in ghosts. If that's what it is, ha-ha, you've all made your point, and I'm wiser for it. But we have to get back on schedule."

"I don't play games," Somerset said disdainfully.

Maris said, "But you know what's going on, don't you? It's Ty. Ty for sure, and maybe Bruno. Bruno's quiet, but he's sly."

"To begin with," Somerset said, "I thought Ty's stories were as silly as you did, but now I'm not so sure. We still haven't found that missing passenger, after all."

"She died in some obscure little spot," Maris said, "or she took a walk out of the airlock. One or the other. The ship was shut down, Somerset. It was killed stone dead. The emp blast fritzed every circuit. No lights, no air conditioning, no heat, no communications, no hope of rescue. Remember that other shuttle we did, last shift? All the crew were gone. They took the big step rather than die a long lingering death by freezing or asphyxiation."

"I did an infrared scan," Somerset said. "Just in case."

Maris nodded. Somerset was smart; Somerset was methodical. Anything warmer than the vacuum, such as a hidey-hole with a warm body living in it, would show up stark white in infrared. She said, "I should have thought of that."

Somerset smiled. "But I didn't find anything."

"There you are."

"Of course, absence of evidence is not evidence of absence."

"Meaning?"

"Its hiding place could be well-insulated. It could be buried deep in the shuttle's structure."

"Bullshit," Maris said. "We'll finish stripping out the circuitry tomorrow. We'll find her body in some corner, and that will be an end to it."

Maris and Somerset didn't find the missing passenger. Ty and Bruno did.

The two men came into the lifiesystem a couple of hours before the end of the shift, ricocheting down the central shaft like a couple of freefall neophytes. Ty was so shaken that he couldn't string together a coherent sentence; even the normally imperturbable Bruno was spooked.

"You have to see it for yourself, boss," Bruno told Maris, after they had all used patch cords to link themselves together, so that Barrett couldn't overhear them.

"If you guys are setting me up for something, I'll personally drag your asses rockside."

"No joke," Ty said. "Clan's honor this is no joke."

"Tell us again what you found," Somerset said calmly. "Think carefully. Describe everything you saw."

Ty and Bruno talked: ten minutes.

When they were finished, Maris said, "If she's in there, she can't be alive."

"Gang #1 found bodies hung on a bulkhead in one of the freighters," Ty said. "Bodies with chunks missing from them. They figure that one of the crew killed the rest. They think that he might still be alive."

Maris said firmly, "No one could have survived for long in any of these hulks. No power, no food, no air . . . it isn't possible."

"You don't know what the gene wizards made for the war," Ty said. "No one does."

Maris had to admit that Ty had a point. Before the Quiet War, Earth had infiltrated the Outer System colonies with spies, doppelgängers, and suicide artists, most of them clones and most of them gengineered. The suicide artists had been the worst—terror weapons in human form, berserkers, walking bombs. One type had hidden themselves near sensitive installations and simply died; symbiotic bacteria had transformed their corpses into unstable lumps of high explosive. Maris's younger brother had been killed when one of these corpse-bombs had blown a hole in the agricultural dome where he had been working.

She said, "Did any of Barrett's drones follow you?"

"Not a one," Ty said.

"You're sure."

"My suit's radar can spot a flea's heartbeat at a hundred clicks. Yeah, I'm sure."

"If Barrett suspected anything, boss," Bruno said, "he would be asking you some hard questions around about now."

"We should consider telling him," Somerset said. "If something dangerous is hiding in there, Symbiosis can provide the appropriate back-up."

"Soldiers," Ty said. "*Armed* soldiers."

"If we could tell anyone other than Barrett, I'd agree with you," Maris said. "But Barrett can't make a decision to save his life. Faced with something like this, something that isn't covered by his precious rule book, he'll panic. The first thing he'll do is sling our asses rockside. The second thing he'll do is, if by some miracle she's still alive, he'll kill her. He'll declare her a saboteur or a spy, kill her, and get promoted for it. Or he'll simply get rid of her, pretend she never existed. And don't try and tell me that this is some spook or monster, Ty. This has to be the missing passenger—Alice Eighteen Singh Rai. A person, not a monster."

"The boss has a point," Bruno said. "Barrett does not accept responsibility for his actions. He hides behind his position in the company, and his position in the company is all he is. In the camp, there were many like him, people who told themselves that they must do terrible things to the prisoners because their superiors demanded it, people who refused to see that they were doing these things out of fear and denial. Those people, they made themselves into monsters, and I think Barrett is that kind of monster. He

will commit murder rather than risk doing something that might endanger his status, and he will tell himself it is for the good of the company."

It was the longest speech any of them had heard Bruno make, and the only time he had ever talked about the labor camp.

"Aw, shit," Ty said. "Let's do it. But if we all get killed by some kind of monster, don't say I didn't warn you."

"I would like you all to remember that I have expressed my reservations," Somerset said.

"If it was a monster," Maris said, "don't you think it would have killed us already?"

They went out together. They carried percussion hammers, bolt cutters, glue guns. Bruno carried a portable airlock kit. Ty carried a switchblade he'd somehow smuggled past Symbiont security. Maris carried a tube of plastic explosive. Somerset carried a portable ultrasonic scanner. They fingertip-flew over the swell of the shuttle's main body toward the flared skirt of the motor's radiation shield. Saturn's pale crescent, nipped like a fingernail paring in the delicate tweezers of its ring system, hung just a few degrees above it. At zenith, the twin stars of the Symbiosis ship, motor and lifesystem linked by a fullerene tether four kilometers long, rotated once a second around their common center.

Beyond the radiation shield, the bulbous cylinder of the motor and most of its ancillary spheres and spars were coated with the black crust of the vacuum organism, smooth as spilled paint in some places, raised in thin, stiff sheets in others. The biggest sheets clustered like mutant funeral flowers around the mass-reaction tanks, a ring of six aluminum spheres, each three meters in diameter, that were tucked in the lee of the radiation skirt. The tanks contained water that had fuelled superheated steam venturis used for delicate attitude control; one of the tanks, Ty claimed, was the hiding place of a monster.

They plugged in patch cords; they went to work.

While Somerset fiddled with the ultrasonic scanner, Maris used a wand to confirm that the tank was leaking minute traces of an oxyhelium mix. Bruno showed her a clear spot in the otherwise ubiquitous coating of the vacuum organism, hidden behind one of the triangular struts that secured the tank to the motor's spine. It was like a dull grey eye surrounded by ridged and puckered black tar; in its center, a fine seam defined a circle about half a meter in diameter.

"That is what gave us the clue," Bruno said. "The vacuum organism must be an oxygen hater. Also, we find a current flowing in it."

"It's not just photosynthetic," Ty said. He hung back from the tank as if ready to bolt, the patch cord that connected him to Bruno at full stretch. His white p-suit was painted with swirling lines and dots that echoed his tattoos.

"It generates electricity," Bruno said. "Something like ten point six watts over its entire surface. Not very much, but enough—"

"I'm ahead of you," Maris said. "It's enough to run the tank's internal heaters. Well, but it doesn't mean that she's alive. What do you see, Somerset?"

Somerset, hanging head down close to the tank's sphere, his orange p-suit vivid against the stiff black sheets of the vacuum organism, was using the ultrasonic scanner. It said, "Nothing at all. It is very well insulated. Maris, you know that we have to tell Symbiosis."

"If it is the missing passenger, she has to be crazy," Bruno said. "Or why would she still be hiding?"

"She has to be some kind of thing," Ty said.

"She has to be dead," Maris said. "Let's get her out of there."

They set dots of plastic explosive around the almost invisible seam. They rigged the portable airlock over it. They took shelter behind another tank, and Maris blew the charges.

An aluminum disc, forced out by pressure inside the tank, shot to the top of the transparent tent of the airlock and bounced back to meet something shuddering out of the hole—another portable airlock struggling to fit inside the first. After nothing else happened for a whole minute, Maris sculled over to investigate. She pushed the visor of her helmet against the double layer of taut, transparent plastic, and shone her flashlight inside.

At the center of the tank, curled up in a nest made from the absorbent material and honeycomb vanes that had channeled the water, was the body of a little girl in a cut-down pressure suit.

They thought at first that she was dead: her p-suit's internal temperature was just two degrees centigrade, barely above the freezing point of water, and she had no pulse or respiration signs. But a quick ultrasonic scan showed that her blood was sluggishly circulating through a cascade filter pump connected to the femoral artery of her left leg. There was also a small machine attached to the base of her skull, something coiled in her stomach, and a line in the vein of her left arm that went through the elbow joint of her p-suit and was coupled to a lash-up of tubing, pumps and bags of clear and cloudy liquids, and the three missing fuel cells.

"That's what happened to the foodmaker," Ty said. "She's got some kind of continuous culture running."

He hung just outside the hatch, watching as Maris and Somerset worked inside the tank, tying off the line into the little girl's arm, detaching a cable trickling amps to her p-suit.

"She is hibernating," Bruno said, his helmet jostling beside Ty's. "I have heard of the technique. Soldiers on the other side were infected with nanotech that could shut them down if they were badly injured."

"Then she's a spy," Ty said.

"I don't know what she is," Somerset said, looking across the little girl's body at Maris, "but I do know that no ordinary child could have rigged this. We should leave her here. Let Symbiosis deal with her as I have already suggested."

"I don't think so," Maris said. "The temperature inside her suit has risen by five degrees, and it's still rising. I think she's waking up."

They waited until the Symbiosis ship was eclipsed by a freighter that was slowly rotating end over end thirty clicks beyond the shuttle, and then rode their sled to the hab-module. Halfway there, the little girl's arms and legs spasmed; Maris held her down, saw that she was dribbling a clear liquid from her mouth and nostrils. Then her eyes opened, and she looked straight at Maris.

Her eyes were beaten gold, with silvery, pinprick pupils.

Maris touched her visor to the little girl's. "It's okay," she said. "Everything's okay, sweetheart. We'll look after you. I promise."

By the time they had bundled her inside the hab-module, the little girl was dazed but fully awake. Out of her p-suit, she stank like a pharm goat

and was as skinny as a snake, in a liner that was two sizes too big. Even though the intravenous line had been dripping vitamins, amino acids, and complex carbohydrates from the yeast culture into her blood, she had used up all of her body fat and a good deal of muscle mass in her long sleep. She seemed to be about eight or nine, was completely hairless, and had bronze skin, and those big silver-on-gold eyes that stared boldly at the wrecking crew who hung around her.

Although she responded to her name, she wouldn't or couldn't talk; hardly surprising, Maris said, considering what she had been through. When Bruno tried to examine the blood pump that clung to her leg like a swollen leech, she drew her knees to her chest and carefully detached it, then reached behind her head, plucked the tiny machine from the base of her skull, and flicked it away. Bruno deftly caught it on the rebound, and after a brief examination said it was some kind of Russian Sleep gadget. "Some monster, boss," he said. "I'm disappointed."

"We could throw her back," Maris said, "and try for something better."

Ty laughed, showing for a moment the wad of green gum that lay on his tongue. He was fascinated by the little girl; his fear had transformed directly to excitement and a kind of proprietorial pride. "She's amazing," he said. "Could you have done what she did? I couldn't."

"None of us could," Somerset said. "That's why she can't be a normal little girl. That's why we have taken a very grave risk in bringing her aboard."

"Aw, come on," Ty said. "Look at her. She's a kid. She's half-starved to death. She couldn't harm a blade of grass."

"Appearances can be deceptive," Somerset said.

Alice Eighteen Singh Rai watched them carefully as they spoke about her, but showed no sign that she understood what they were saying.

"She would have died if we had not found her," Bruno said. "Whatever she is, she needs our help."

"Of course," Somerset said. "But we know nothing about her."

Ty snorted air through his nose. "What are you saying, we should tie her up?"

"We should certainly take precautions," Somerset said, ignoring Ty's sarcasm.

Maris decided that Somerset needed something to do, and told him, "Before we can decide anything, I need you to find out everything you can about where Alice came from."

"Somewhere on Iapetus, I should think," Somerset said. "That was the shuttle's point of departure, according to its manifest. It was on a straight run to Mimas when the emp mine intercepted it."

"I'm sure you can find out exactly where on Iapetus."

"I will try my best," Somerset said, and swam off to its cubicle.

"And take the rod out of your ass while you're about it," Ty murmured.

"Somerset does have a point," Bruno said. "We have to think very carefully about what we're going to do."

"I'm going to have to come up with some excuse for Barrett," Maris said. "But first, I'm going to give this little girl her first shower in three hundred days."

Alice Eighteen Singh Rai scrubbed up well, submitting docilely to the air-mask necessary in the freefall shower. Enveloped in one of Maris's jumpers, she refused the bags of chow Ty patiently offered one by one, then suddenly kicked off toward the kitchen nook, quick and agile as an eel. She had

ripped open a tube and was cramming black olive paste into her mouth before Ty could pull her away by an ankle.

"Let her eat," Maris said. "I think she knows what her body needs."

"Man," Ty said, wonderingly, "she sure is hungry."

Bruno said, "I have only a minimum of medical training, boss. I don't know anything about mental illness or brain damage. The autodoc can work up her blood and urine chemistry for chemical signs of psychosis, but that's about all. I hate to say it, but the Symbiosis ship has better facilities."

"I don't want to turn her over to Barrett."

Bruno nodded. His eyes were dark and solemn under the brim of his knitted cap. "She's one of us, isn't she?"

"She's no ordinary little girl. Somerset is right about that. But she's no monster, either."

"She sure is hungry," Ty said again, watching with tender pride as Alice unseamed her third tube of olive paste.

Maris left her with Ty and Bruno, and, with heavy foreboding, wrote up a false report for the day log and sent it off. Barrett called back almost at once. He said, "I want to believe you, but somehow I'm having a hard time."

Maris's first thought was that one of Barrett's drones had spotted them working around Alice's nest. She hunched over the com, sweat popping over her body. Her pulse beat heavily in her temples. She said, "If this is about why we're still behind—"

"Of course it is. And I'm very disappointed."

"The vacuum organism caused a bigger problem than we anticipated."

"All you have to do is cut through it," Barrett said scornfully. "Cut through it, scorch it off, *deal* with it."

"Can you tell me about the shuttle's cargo, Barrett? What was it carrying?"

Barrett gave her a sharp, bright look. "Why do you want to know?"

"Perhaps the vacuum organism was part of the cargo. If we know what it is, we can deal with it more easily."

"The v.o. was checked out when the cargo pods were detached. It's nothing out of the ordinary."

"Don't you have more specific information? The ship was recovered five months ago. Symbiosis must know what was in the cargo pods by now."

"That's none of your business, Delgado. Your business is to render down that shuttle, and your gang is a whole ten hours behind. You have to understand that Symbiosis wrote up these work schedules with generous margins—"

Relief that Barrett didn't seem to know about Alice made Maris bold. She said, "The schedules weren't drawn up with vacuum organism contamination in mind."

"Please don't interrupt me again," Barrett said, all frosty rectitude. "The margins are there, and you've overrun them. You know the contract regs as well as I, Delgado. What else can I do?"

"Okay, fine, take off ten hours pay."

"A day's pay plus penalties. The contract is quite specific."

"Okay."

"What's wrong, Delgado? Talk to me. Are you having trouble maintaining discipline?" Barrett suddenly mock-sollicitous, leaning so close to the camera that his face looked like a pockmarked moon, his silly little braid wagging on his chin.

"There's no problem," Maris said, snapping off the com and instantly regretting it. It was a sign of weakness, and the one skill that Barrett had honed to perfection was sniffing out weaknesses in others.

She waited five minutes in case he called back, then sculled back to the living quarters. Ty and Alice were watching a TV sheet floating in the air. Both were chewing gum. Bruno and Somerset broke off a whispered conversation, and Somerset told Maris, "I have found out where she came from."

The Saturn infonet had been badly damaged during the Quiet War, but after running Alice's name through half a dozen clandestine search engines, Somerset had discovered that the shuttle's cargo and passenger had both originated in Hawaiki, an agricultural settlement on the great dark plains of Iapetus's Cassini Regio.

"I discovered something else, too," Somerset said. "The settlement was designed by Avernus."

The name of the woman who had been the Outer System's most famous gene wizard, and was now its most wanted so-called war criminal, hung in the air for a moment.

"Man," Ty said, "I knew our Alice was something special. Didn't I say she was special?"

"Avernus was famous for the totality of her designs," Somerset said. "She tailored both ecospheres and their inhabitants. Given her appearance and what she did to survive, it seems quite likely that our guest benefited from Avernus's art."

Alice smiled at them all, seemingly quite happy to be the center of their attention.

"It doesn't mean that she's a monster," Maris said forthrightly, although she had to admit that Somerset's discovery was disquieting. Avernus had dedicated her considerable skills to pushing the envelope of humanity's range. Some of her commissions—a sect in which adults lost the use of their limbs and eyes and grew leathery, involuted integuments stained purple with photosynthetic pigment, becoming sessile eremites devoted to praising God; a community with a completely closed ecosystem, the bellies of its citizens swollen with sacs of symbiotic bacteria—had tested even the generously inclusive tolerance of the outers.

"Aw, hell," Ty said, "according to the flatlanders, we're *all* monsters. And you know what? It's *true*. We're all tweaks, and we're all proud to be tweaks! Flatlanders need drugs and nanotech to live here, but we're engineered for low-gravity. Maybe Avernus gave Alice a few extra special abilities, but so what?"

Maris asked Somerset, "Can we get in touch with Alice's home?"

"Hawaiki no longer exists," Somerset said. "It was captured and destroyed during the war."

"There must be survivors," Maris said.

"They were probably put in a camp," Bruno said darkly. "One of those experimental camps."

"Hey," Ty said, "not in front of Alice."

"The TPA must know," Somerset said, "but there are no records that I can access."

"One thing is certain," Maris said. "We were absolutely right not to tell Barrett about Alice."

She remembered with a chill the supervisor's sudden bright look when she had asked about the shuttle's cargo, and knew that he knew all about the shuttle's passenger, knew that she was valuable.

"You're going to stay here," Ty told the golden-eyed little girl. "Stay here with us, until we find a way of getting you back to your family."

"I would like to know," Somerset said, "how we can keep Barrett from finding out about her."

"We just don't tell him," Maris said.

"I'm relieved to see that you have thought it through," Somerset said.

Bruno said, "The boss is right, Somerset. Barrett hardly ever leaves his ship. If we don't tell him about Alice, he'll never know."

"This isn't like playing around in your garden," Ty said. "This is for real."

"My garden has nothing to do with this," Somerset said.

"Ty didn't mean anything by it," Maris said.

"I meant," Ty said doggedly, "that this is the *real* world, where what you do has real consequences for real people. We rescued Alice, Somerset, so it's up to us to look after her."

"I believe that we have all agreed that Barrett would almost certainly kill Alice if he found out about her," Somerset said, with acid patience. "It follows that the only morally correct course of action is to assume responsibility for her care. I merely point out that it is also a very dangerous course of action."

"Nevertheless, we're all in this together," Maris said.

Everyone looked at everyone else. Everyone said yes. Alice smiled.

Maris, strung out by anxiety and the physical exhaustion of zero-gravity work, fell asleep almost as soon as she wriggled into her sleeping bag. She slept deeply and easily, and when she woke in the middle of the night, it took her a little while to realize what was wrong.

The spavined rattle and bone-deep thrum of the air conditioning was gone.

Maris pushed up her mask, hitched out of the sleeping bag, and ducked through her privacy curtain. Ty and Bruno hung in midair, watching Alice mime something in the soft red light of the hab-module's sleep-cycle illumination. Ty spun around as Maris caught a rung. He was chewing gum and grinning from ear to ear. "She fixed the air conditioning," he said.

"You mean she broke it."

"She *fixed* it," Ty insisted. "Listen."

Ty and Bruno and Alice watched as Maris concentrated on nothing but the sound of her own ragged breath . . . and heard, at the very edge of audibility, a soft pulsing hum, a whisper of moving air.

Somerset shot through its privacy curtain, caught a rung, reversed. Its crest of white hair was all askew. It said, "What did she do?"

Bruno said, "She altered the rate of spin of every fan in the system, tuning them to a single harmonic. No more vibration."

"Alice knows machines," Ty said proudly.

"It seems she does not sleep," Bruno said. "So, while we slept, she fixed the air conditioning."

"Swaddling," Somerset said. "Or a tether. I am serious. Suppose she meddles with something else? We do not know what she can do."

"Alice knows machines," Ty insisted, proud as a new parent.

Which, in a sense, he *was*, Maris thought. Which, in a sense, they all were.

She sculled through the air until her face was level with Alice's. Those strange silver-on-gold eyes, unreadable as coins, stared into hers. She said gently, "You did a good job, but you mustn't touch anything else. Do you understand?"

The little girl nodded—a fractional movement, but a definite assent.

"If she did a good job," Ty said, "what's the problem?"

"We hardly know anything about her," Somerset said. "That's the problem."

"You can find out," Bruno told Somerset. "Use those data mining skills of yours to dig deeper."

"I have found all there is to find," Somerset said. "The war wrecked most of the infonet. I am surprised that I found anything at all."

"Let's all get some rest," Maris said. "We have to start work in three hours. A lot of work."

She did not think that she would get back to sleep, but she did, and slept peacefully in the harmonious murmur of the fans.

They started their shift early. As they all sucked down a hasty breakfast of gritty, fruit-flavored oat paste and lukewarm coffee, Somerset made it clear just how unhappy it was about leaving Alice alone in the hab-module.

"We should take her with us," the neuter said. "If she is as good with machines as Ty claims, she can be of some help."

"No way," Maris said. "Even Barrett can count up to five. What do you think he'll do if he spots an extra body out there?"

"Then someone should stay behind with her," Somerset said stubbornly.

"If Barrett can count up to five," Maris said, "he can also count up to three. None of us can afford to lose any more pay, and we'll never catch up on our schedule if we're one body short."

Ty said, "Alice, honey, you know we have to go out, don't you? You promise you'll be good while we're away?"

Alice was floating in mid-air with her arms hooked under her knees, watching TV; when she heard her name, she looked over at Ty, eyes flashing in the half-dark, and nodded once.

"You see," Ty said. "It's not a problem."

"I don't like what she did to the air," Somerset said. "It smells strange."

"If by *strange* you mean it doesn't smell of crotch-sweat and stale farts any more," Ty said, "then I don't think it's strange—I think it's an improvement!"

"The temperature is higher, too," Somerset said.

"Yeah," Ty said. "Nice and comfortable, isn't it? Look, Somerset, Alice is just a kid. I guess, what with your religious bent and all, you might not know much about kids, but I do. I used to look after a whole bunch of them back in the clan. Trust me on this. *There's no problem.*"

"She is not merely—"

Maris flicked her empty paste and coffee tubes into the maw of the disposal. "No time for argument, gentlemen. Suit up and ship out. We have plenty of work to do."

For a little while, absorbed in the hard, complicated job of dismounting the shuttle's fusion plant, they all forgot their worries. Clambering about the narrow crawlspaces around the plant's combustion chamber, they severed cables and pipes, sheared bolts and cut through supports, strung temporary tethers. They worked well; they worked as a team; they made good

time. Maris was beginning to plan the complicated pattern of explosive charges that would pop the fusion plant out of its shaft when her radio shrieked, a piercing electronic squeal that cut off before she could access her suit's com menu.

Everyone shot out of the access hatch, using their suit thrusters to turn toward the hab-module.

"Alice," Ty said, his voice sounding hollow in the echo of the radio squeal. "She's in trouble."

Bruno, his p-suit painted, Jupiter-system style, with an elaborate abstract pattern, spun around and shot off toward the sled. Maris saw the black sphere of Barrett's pressurized sled clinging like a blood-gorged tick to one of the hatches of the hab-module's airlock, and chased after him.

Bruno took the helm of the sled, told them all to hang on, and punched out with a hard continuous burn. Directly ahead, the hab-module expanded with alarming speed.

"You'll overshoot," Somerset said calmly.

"Saint Isaac Newton, bless me now in my hour of need," Bruno said. He flipped the sled with a nicely judged blip of its attitude jets, opened the throttle in a hard blast of deceleration that seemed to squeeze every drop of Maris's blood into her boots, and fired off tethers whose sticky pads slapped against the airlock and jerked the sled to a halt.

Maris signed for radio silence. They fanned out, peering through viewports into the red-lit interiors of the two cylinders. Somerset's orange-suited figure, at the far end of the workspace, raised a hand, pointed down. The others clustered around him.

Alice stared up at them through the little disc of scratched, triple-layered plastic. After a moment, she smiled.

They opened the airlock's secondary hatch and cycled through, the four of them crowding each other in the little spherical space as they shucked helmets and gloves. Alice was waiting placidly in the center of the cluttered workroom, floating as usual in midair, hands hooked under her knees.

"Oh my," Maris said in dismay.

Still in its yellow p-suit, Symbiosis's sunburst-in-a-green-circle logo on its chestplate, Barrett's body was strung against the bulkhead behind Alice. Its arms were bound to its sides by a whipcord tether; a wormy knot of patch sealant filled the broken visor of its helmet. The end of Barrett's braided beard stuck out of the hard white foam like a mountaineer's flag on a snowy peak. Maris didn't need Bruno's pronouncement to know that the supervisor was dead.

It took Ty ten minutes to get the story from Alice. He asked questions; she answered by nods or shakes. Apparently, Barrett had come looking for her after his AI had decrypted and audited Somerset's infonet usage records; he'd boasted about his cleverness. He had been friendly at first, but when Alice had refused to answer his questions, he had threatened to kill her. That was when she had immobilized him with the tether and suffocated him with the sealant.

Somerset found Barrett's weapon. It had fetched up against one of the air-conditioning outlets.

Ty asked Alice, "Did he threaten to kill you, honey?"

A quick nod.

"Why did he want to kill you? Was he scared of you?"

Alice nodded, then shook her head.

"Okay, he was scared of you, but that wasn't why he wanted to kill you."

A nod.

"He wanted something from you."

A nod.

"He probably wanted *Alice*," Bruno said. "She has been gengineered by Avernus. Her genome, it must be very valuable."

Alice shook her head.

Ty said, "What did he want, honey?"

Alice put a finger to her lips, assumed a sudden look of inward concentration, and started, very delicately, to choke. She shook her head when Ty reached for her, coughed, and started to pull something from her mouth.

Blue plastic wire, over two meters of it.

Maris's parents had owned a vacuum organism farm before the war; she knew at once what the wire was. "That's how vacuum organism spores are packaged."

Alice smiled and nodded.

Maris said, "Does it contain spores of the vacuum organism growing on the shuttle?"

Alice nodded again, then held up her right hand, opened and closed it half a dozen times.

Ty said, "It contains all kinds of spores?"

Bruno said, "This is why you were a passenger. You were carrying it all the time."

"Symbiosis knew about it," Maris said. "They must have had the complete cargo inventory. When they didn't find it in the cargo pods, they searched the lifsystem for the only passenger. And Barrett knew about it too, or found out about it. That's why he sent drones to watch us as we stripped out the lifsystem."

"He did not watch us work outside," Bruno said.

"Barrett is a flatlander," Maris said. "It didn't occur to him that the passenger might be hiding outside. Outside is a bad, scary place, as far as flatlanders are concerned; that's why he hardly ever left his ship. But then he discovered Somerset's trail in the infonet, and worked out that we had found Alice. He wanted her for himself, so he couldn't confront us directly; he waited until we went to work, got up his nerve, and came here."

Somerset was hanging back from the others, near the hatch to the airlock. It said, "You grow an intricate story from only a few facts."

Ty told the neuter, "Don't you realize it's *your* fault Barrett found out about Alice?"

"I asked Somerset to make a search on the infonet," Maris said. "It isn't its fault that Barrett's AI was able to break into its records. And I was stupid enough to ask Barrett about the shuttle's cargo, which probably made him suspicious in the first place." She took a breath to center herself, called up every gram of her resolve. "Listen up, you three. We all brought Alice back; we all decided that we couldn't give her up to Barrett; we're all in this together. We have to decide what to do, and we have to do it quickly, before the crew of the Symbiosis ship start to worry about their boss."

"Somerset has a point," Bruno said. "We don't know what happened between Alice and Barrett."

"He didn't come over for a social visit," Ty said. "He wanted these spores, he threatened her with the weapon. That's why she killed him."

Somerset said calmly, "I am not sure that Symbiosis will believe your story."

Ty knuckled his tattooed scalp. "Fuck you, Somerset! *I know* Alice is no murderer, and that's all that matters to me."

"That's the problem," Somerset said, and pointed Barrett's weapon at Ty. It was as black and smooth as a pebble, with a blunt snout that nestled between the neuter's thumb and forefinger.

Maris said, "What are you doing, Somerset?"

Somerset's narrow face was set with cold resolve. It looked wholly masculine now. It said, "This fires needles stamped from a ribbon of smart plastic. Some of the needles are explosive; others sprout hooks and barbs when they strike something; they all cause a lot of damage. It is a disgusting weapon, but I will use it if I have to, for the greater moral good."

"Stay calm, Somerset," Maris said. "Don't do anything foolish."

"Yeah," Ty said. "If you want to play with that, go outside."

"I want you all to listen to me. Ty, before we found Alice, you were convinced that she was a monster. I believe that you were right. Because she looks like a little girl, she triggers protective reflexes in ordinary men and women, and they do not realize that they are being manipulated. I, however, am immune. I see her for what she is, and I want you all to share this clear, uncomfortable insight."

Ty said, "She killed Barrett in self-defense, man!" He had drifted in front of Alice, shielding her from Somerset.

"We do not know what happened," Somerset said. "We see a dead man. We see what looks like a little girl. We make assumptions, but how do we know the truth? Perhaps Barrett drew this weapon in self-defense."

Maris said, "You don't like violence, Somerset. I understand that. But what you're doing now makes you as bad as Barrett."

"Not at all," Somerset said. "As I believe I have said before, if you take the side of a murderer with no good reason, then you are as morally culpable as she is."

"She isn't a murderer," Ty said.

"We do not know that," Somerset insisted calmly.

"You fucking traitor!" Bruno said, and dove straight at the neuter.

Somerset swung around. The weapon in his fist made a mild popping sound. Bruno bellowed with pain and clutched at his right arm. Suddenly off-balance, he missed Somerset entirely, slammed against the edge of the airlock hatch, and tumbled backward. And Alice spun head-over-heels and threw something with such force that Maris only saw it on the rebound, after it had sliced through Somerset's fingers. It was a power saw blade, a diamond disc that ricocheted sideways and lodged in the door of a locker with an emphatic thud. Somerset, its truncated right hand pumping strings of crimson droplets into the air, made a clumsy grab for the weapon; Maris snatched the black pebble out of the air, and Ty knocked the neuter through the airlock hatch.

Ty and Maris trussed Somerset with tethers, and Bruno staunched its bleeding finger stumps and gave it a shot of painkiller before allowing Maris to bandage his own, much more superficial wound. Alice hung back, calm and watchful.

"I am lucky," Bruno said. "It was not an explosive needle."

"You're lucky Somerset couldn't shoot straight," Maris told him.

"I don't think Somerset wanted to kill me, boss."

"We should make the fucker take the big walk without its suit," Ty said, glaring at Somerset.

"You know we can't do that," Maris said.

"I can do it," Ty said grimly.

Somerset returned Ty's angry glare with woozy equanimity, and said, "If you kill me, you will only prove that I was right all along."

"Then we'll both be happy," Ty said.

"She's *using* us," Somerset said, slurring every s, "and no one sees it but me."

Maris grabbed the hypo from the medical kit and swam up to Somerset. "You can't keep quiet, can you?"

"Silence is a form of complicity," Somerset said. Its eyes crossed as it tried to focus on the hypo. "I do not need another shot. I can bear pain."

"This is for *us*," Maris said, and pressed the hypo against Somerset's neck. The neuter started to protest, but then the blast of painkiller hit and its eyes rolled up.

"We could fly it right out of the airlock," Ty said. "It wouldn't feel a thing."

"You know we aren't going to do any such thing," Maris said. "Listen up. Any minute now, the ship's crew are going to notice that their boss is missing. What we have to do is work out what we're going to tell them."

Ty said, "I'm not giving her up."

"We know Alice must have killed Barrett in self-defense," Maris said. "We can testify—"

Bruno said, "Ty is right, boss. We know that Alice isn't a murderer, but our testimony won't mean much in court."

Alice waved her hands to get their attention, then pointed to the workshop's camera.

"It's recording," Ty said. He laughed, and turned a full somersault in midair. "Alice knows machines! She had the internal com record everything!"

Maris shook out a screen, plugged it into the camera, and started the playback. Ty and Bruno crowded around her, watched Barrett struggle through the airlock in his p-suit, watched him question Alice, his p-suit still sealed, his voice coming cold and metallic through its speaker. He loomed over her like a fully armed medieval knight menacing a helpless maiden. Her stubborn intervals of silence, his amplified voice getting louder, his gestures angrier. Alice shrank back. He showed her his weapon. And Alice flew at him, whipping a tether around his arms and body, the tether contracting in a tight embrace as her momentum drove him backward; she wrapped her legs around his chest, smashed his visor with a jackhammer, and emptied a canister of foam into his helmet.

The camera saw everything; it even picked up the glint of the weapon when it flew from Barrett's gloved hand. He flung his helmeted head from side to side, trying to shake off the foam's suffocating mask; Alice pressed against a wall, unobtrusively out of focus, as his struggles quietened.

Maris said, "It looks good, but will it look good to the court?"

"We can't turn her over to Symbiosis or the TPA police," Bruno said. "At best, they'll turn her into a lab specimen. At worst—"

"Where is she?" Ty said.

Alice was gone; the hatch to the airlock was closed. Neither the automatic nor manual system would budge it. As Bruno prized off the cover of the

servomotor, Maris joined Ty at the door's little port, saw Alice wave bye-bye and shoot through the hatch into Barrett's sled. A moment later, there was a solid thump as the sled decoupled.

Maris and Bruno and Ty rushed to the viewports.

"Look at her go!" Maris said.

"Where is she going?" Ty said.

"It looks like she is heading straight to the Symbiosis ship," Bruno said. "She sure can fly that sled."

"Of course she can," Ty said. "What do you think she's going to do?"

"We'll see soon enough," Maris said. "Meanwhile, let's get busy, gentlemen."

Bruno glanced at her. "I do believe you have a plan," he said.

"It's not much of one, but hear me out."

By the time Ty and Maris had hauled Barrett's body to the shuttle, his sled had docked with the motor section of the Symbiosis ship. They tethered the body to the tank where Alice had slept out three hundred days, and tethered the weapon to the utility belt of its p-suit. Maris dragged some of the plastic insulation out of the tank's hatch for dramatic effect, fired a couple of shots into the tangle of bags and tubes inside, then scooted back to look at her work. The tank looked like something had hatched from it in a hurry; Barrett's body, with its mask of lumpy foam, hung half-folded like a grotesque unstrung puppet, its yellow p-suit vivid against the black film of the vacuum organism.

"It looks kind of cheesy," Ty said doubtfully, over their patch cord link.

"If you have a better idea," Maris said, "let me know."

"Maybe it's because I don't think he would have had the sense to tether his weapon."

"He found where Alice was hiding," Maris said, "and opened up the tank. There was a struggle. She killed him and took his sled. The weapon is necessary. It shows he meant her harm. If we don't tether it to him, it'll drift off somewhere and no one will find it. So let's pretend that in his last moments he was overcome with common sense."

"Yeah, well, none of that will matter if the crew knew where he was going in the first place."

"We've been over that already. Barrett wouldn't have told them where he was going because he wanted what Alice had for himself. Otherwise, you can bet that he would have come with plenty of back-up, or sat tight in the safety of his ship and let the Symbiosis cops take care of it."

Ty looked as though he was ready to argue the point, but before he could say anything, Bruno broke in on the common channel. "Heads up," he said. "The Symbiosis ship just broke apart. It would seem that the cable linking the two halves has been severed."

Maris called up her suit's navigation menu, and after a couple of moments, it confirmed Bruno's guess. With the cable cut, the lifesystem and motor section of the ship had shot away in opposite directions. The lifesystem, tumbling badly, was heading into a slightly higher orbit; the motor section was accelerating toward Saturn, its exhaust a steady, brilliant star beyond the ragged sphere of wrecked ships. Maris's com system lit up: the distress signal of the Symbiosis ship's lifesystem; messages from the other two wrecking gangs; Dione's traffic control.

"A perfect burn," Bruno said, with professional admiration. "It is too early

to judge exactly, but if I had to make a guess, I would say that it is heading toward the rings."

"Let's get packed up," Maris told Ty, over the patch cord. "The cops will be here pretty soon."

"She'll be all right, won't she?"

"I think she knew what she was doing all along."

Back at the hab-module, Maris and Ty stripped off their suits and grabbed tubes of coffee while Bruno flipped through a babble of voices on the radio channels. Two tugs were chasing the Symbiosis ship's lifesystem, but as yet no one was pursuing the motor section. Bruno had worked up a trajectory, and showed Maris and Ty that it would graze the outer edge of the B ring.

"One hears many wild stories of rebels and refugees hiding inside the minor bodies of the rings," he remarked. "Perhaps some of them are true."

Maris said, "She's going home."

A small, happy thought to cling to, in the cold certainty of days of inquiries, investigations, accusations. Wherever Alice was going, Wrecking Gang #3 was headed rockside, their contracts terminated.

"We'll have to let Somerset go," she said.

"I still think we should make it take the big step," Ty said. "Anyone seen my TV? Maybe the news channels will tell us what's going down."

"Somerset is a fool," Bruno said, "but it is also one of us."

Maris said, "I can't help wondering if Somerset was right. That we were manipulated by Alice. She killed Barrett and ran off, and left us to deal with the consequences."

"She could have taken Barrett's shuttle as soon as she killed him," Bruno said. "Instead, she took a very big risk, alerting us with that radio squeal, waiting for us to get back. She wanted us to know she was innocent. And she wanted to give us a chance to get our story straight."

Maris nodded. "It's a pretty thought, but we'll never know for sure."

Ty suddenly kicked back from his locker, waving something as he tumbled backward down the long axis of the living quarters. It was his TV, rolled up in a neat scroll. "Will you look at this," he said.

The scroll was tied with a length of blue wire. The wire Alice had regurgitated. The cargo she had guarded all this time.

The consequences of Barrett's murder and the sabotage of the Symbiosis ship took a couple of dozen days to settle. Maris and the rest of Wrecking Gang #3 spent some of that time in jail, but were eventually released without trial.

Before the cops came for them, they agreed to take equal shares of Alice's gift. At first, Ty didn't want to give Somerset anything, and Somerset refused to take its share of the wire.

"I have agreed to lie about what happened. I have agreed to tell the police that my injury was caused by an accident. I do not need payment for this; I do it to make amends to you all."

"It isn't payment," Maris said. "It's a gift. You take it, Somerset. What you do with it is up to you."

Maris hid the wire by splicing it into the control cable of her p-suit's thruster pack. It turned out to be an unnecessary precaution; Symbiosis believed that the passenger had taken the missing vacuum organism spores with her, after she had killed Barrett and hijacked the engine section of his

ship, and the police's search of the hab-module was cursory. After they were released, the members of Wrecking Gang #3 met just once, to divide the spore-laden spool of wire into four equal lengths. They never saw each other again.

Somerset and Bruno sold their portions on the grey market. Somerset donated the money to his temple's refugee center; Bruno bought a ticket on a Pacific Community liner to the Jupiter System. Maris became a farmer. With an advance on the license fees for the two novel varieties of vacuum organism that her length of wire yielded, she and her family set up an agribusiness on Iapetus, ten thousand square kilometers of the black, carbonaceous-rich plains of Cassini Regio. The farm prospered: the population of the Outer System was expanding rapidly as the economy recovered and migrants poured in from Earth. Maris married the technician who had helped type her vacuum organisms. He was ten years younger than her, and eager to start a family. The dangerous idea of exploring the ruins of the domed crater where Alice's family had lived was an itch that soon dissolved in the ordinary clamor of everyday life.

A few years later, on a business trip to Tethys, Maris paid a spur-of-the-moment visit to the hearth-home of Ty's clan. She learned that he'd given them his length of wire and set off on a *Wanderjahr*. His last message had been sent from a hotel in Camelot, the only city on Mimas, the small, icy moon whose orbit lay between Saturn's G and E rings. It seemed that Ty had taken a sled on a trip to the central peak of Hershel, the huge crater smashed into the leading edge of Mimas, and had not returned. The sled had been found, but his body had never been recovered.

Maris believed that she knew what grail Ty might have been searching for under the geometric glory of Saturn's rings, but she kept her thoughts to herself. Tales of feral communities, fiddler's greens, pirate cities, rebel hide-outs, edens, posthuman clades, and other wonders hidden in the millions of moonlets of Saturn's rings were by now the mundane stuff of sagas, psychodramas, and the generic fictions broadcast on illicit TV. Maris knew better than most that a few of these stories had been grown from grains of truth, but by now there were so many that it was impossible even for her to tell fact from fable. ○

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THE WEREWIFE'S WHELPS LEAVE HOME

And when the young beasts
began to hunt alone
and dig their own lairs,

although she had taught them
to beg, sit, stay, bark, and play dead,
and although
they could be gotten to heel at walk time
and would bristle
at the least hint of offense to her,
or bite the heads off intruders
only on command,

and although they would even,
on occasion,
stop barking
when told to shut up,
and even though she had taught them
to walk on their hind legs
and approximate
the manners of her kind,

their irresistible vulnerability
notwithstanding,
nor their great beauty,
strength,
courage,
and nobility of bearing,

when they went out
into their image of the world,
they were,
despite all her work,
beasts.

—William John Watkins

LIFE IN THE SARDINE LANE

R. Neube

R. Neube tells us that when he's not acting as a doorman for his cats, he strives to complete his 1996 to-do list. The author is currently co-editing the anthology *Feral Parakeets and Other Stories* for the Cincinnati Writers Project, as well as working on his novel *Possum in a Blender*.

Our radar crashed. My best apprentice yelped like a scalded puppy. Punching the machine, I cursed. The comm squealed and died. Across the board, computers cascaded into systems failure, starting with the navputer. One day, I promised myself, I'd find the purveyor of these low-bid electronics and express my disgust with a lead pipe.

"Our hardware has gone on strike again!" I shouted. "What do we do?"

Jeff, my best apprentice, froze in the copilot's pit. I expected more from Jeff; he'd done so well on the simulator. Lucy and Tae behind me stammered nonsense, understandable since they'd logged only a few hours on the bridge.

The screens showing the view through our camera eyes outside the ship flickered out. It happened so often my adrenal glands continued to nap.

"Remember how I downloaded the slot numbers into my chip-plate?" I hinted.

They didn't.

Apprentices made my brain ache.

I banged the F-mode. The alien Dyb' who built our grainship preferred minimal instrumentation; minimal meant reliable—only the add-on devices of human origin had crashed. After checking the data on the chip-plate in my lap, I adjusted the stabilizers to one-second bursts. A quick double check, and I fired the port and dorsal jets. I counted to four and fired the port alone. Grainship 541 inserted itself into the holding lane around the orbital city.

The starboard cameras came back online in time to show a looming factory. It was too late to react. Grainships maneuvered like whales on ice. We skated past the factory with millimeters to spare.

I flashed back years, watching my mentor, my love, as he fought to correct a last-minute snafu. My memory choked on the image of his ship ramming an orbital city, just like the one we now circled.

Now my adrenal glands exploded. My apprentices screamed. I was too

stunned to curse. Why hadn't I remembered seeing that factory on the radar before it crashed?

"Old," I hissed between clenched teeth, "you're getting too old, Talce!"

The comm finally came online. A traffic controller on New Albany Polis was screaming her head off. I triggered a pre-recorded message warning of our systems-failure. I had taped my usual explanation last year when gremlins made our electronics their permanent address; it saved considerable wear and tear on my throat.

Jeff lost his lunch. I fiddled with the mirror over my head to scan the duo behind me. Lucy and Tae appeared pale and shaking, but okay.

"Clean that up NOW, Jeff," I shouted.

He was toast. I would have Mayor Qin fire him; about time the boss earned his pay for a change. Poor Jeff. He'd probably make a decent copilot on a real ship. A real ship that wouldn't leave the dock with gremlined electronics.

Unfortunately, a grainship was far from real. Decades ago, the transports had been yanked out of mothballs by the Dyb' and given to humanity in the wake of Earth's nuclear suicide during World War III. The industry to convert them to long-term homes for refugees didn't exist. Not that there had been time for that luxury. Radiation never waited.

Ersatz was more than a word to us—it was our sardine lifestyle.

The traffic controller yelled herself hoarse. I killed the recording and went live. "I still haven't got my radar back. Am I going to hit anything in my present slot?"

That roused another bout of name-calling. We were scheduled to dock at the orbital city for mandated charity on Friday. Now we'd be lucky if they made room for us a week from Friday. Not that it made any difference whether we spent the time circling this orbital city or wending to our next scheduled charity site.

Just another day in the life of a grainer.

My off-shifts were spent walking instead of sleeping. For some reason, my fortieth birthday had been the dawn of an insomniac era.

Doc Marquez had failed to find anything wrong with me. Of course, back on Earth, before the nukes rained, Doc had been a glorified witch doctor in the Sierra Madres. Fortunately, he took his role seriously enough to get extensive paramedic education. We were lucky to have him. Most grainships had some loser who learned medicine via vids.

I paced the maze of my ship without thought. Movement acted as sort of a Zen mind-blanker. Left, right, left . . .

I paced past the vid room. A familiar sound drew my head through the curtain. *This Island Earth* played, treating a pair of lovers to meteorites trashing a world while they thrashed on the floor. A third occupant slept with his head on a lumpy burlap poke. He rolled over and curled into a fetal position. Tae's long white braids hid his moon face. What was my apprentice doing here?

Burlap poke? Hadn't Tae stashed the bag under his barca on the bridge when he arrived for the day's lesson? I'd meant to ask, but it'd slipped my mind.

The mystery sank its teeth into my imagination. Why wasn't Tae sleeping at home? I examined the movie schedule. They'd been running SF films from last century all day. The Tae I knew was more prone to be watching a documentary on steel-making.

I leaned against the corrugated wall, almost dinting the aluminum before I realized it. It'd be tacky to disturb the lovers. Life in the sardine lane of a grainship made folks touchy about disturbing others.

"You are getting old," I muttered. "How many times have you turned your quarters over to friends for an intimate rendezvous? Have you forgotten what it was like to be young?"

Chuckling to myself, I continued my peregrination.

I was scrambled by the hotline Mayor Qin had installed in my cabin—punishment for ignoring our fearless leader in the past. Great, two hours of sleep, and Qin had suffered another crisis. I picked up the phone and yelled, "Give me a min!" before slamming it down.

Crawling out of my coffin, I bumped my head as usual. A mug of coffee—the only luxury I allowed myself—stilled the homicidal urges. Nonetheless, its opulence knotted my stomach with guilt. Procrastinating, knowing how Qin would be fuming over the wait, further eased my anger.

Actually, Qin was the twelfth and best mayor to serve during my tour as captain. I had a feeling that his political machine and its insipid patronage would win the annual elections for the rest of his life. As much as I disliked his venal machine, I liked Qin when he wasn't waking me. You couldn't help but like the avuncular singer of show tunes.

Unless, of course, decisions had to be made that might lose him votes. Those had become the captain's purview.

I banged my keyboard, preferring to deal with Qin 'puter-to-'puter rather than face-to-face. Irritated, I first pecked my demand that Qin fire Jeff as my apprentice. I logged my request, so he couldn't claim it hadn't been posted.

The mayor had already left a message on my machine. Was I that predictable?

NEW ALBANY WANTS TO CHAT WITH YOU. ASK FOR SUPERVISOR FORD.

My fault. I hadn't noticed that factory on the radar before it crashed. The report would read pilot error, and it would be right. I had given the outsiders another reason to hate grainers.

Donning my headset, I plugged into the comm. On the orbital city, a secretary directed me to his manager, who shifted me to the supervisor's secretary, who transferred me to a personal assistant, who finally connected me to Supervisor Ford.

Wasn't that punishment enough?

No, I also endured a rant from the politico about my irresponsibility. It must have been a slow day for him. It was a long hour for me.

Afterward, I had an aspirin and crawled back into my coffin. Sleep spurned me. I tossed and turned and pondered.

A coffin was all most grainers had. Stacked three high, the boxes filled our holds. A meter tall and wide, 2.5 meters long, they were grainer apartments.

Other than the mayor's suite, my quarters were the only private ones. I had all the space I wanted, but not my peace of mind. My huge suite plagued me, so I had installed a coffin to create the illusion that I lived just like my 18,837 peers who were dying a day at a time around me.

"Outsiders must hate us to make us live like this," I grouched for the billionth time.

I honestly didn't believe that humanity hated us. The problem was that

there were too many grainers. Over a thousand grainships flew the circuit between the habitats and polis of Sol System, receiving mandated charity on a schedule so complex that the Trade Commission kept a staff of hundreds to maintain it.

The nuked ruins of Earth hung before us wherever we went, a reminder of how homeless we truly were. How fortunate we were that the Dyb', in their infinite whimsy, had rescued us from the fallout and battle germs after World War III sputtered on to the last ICBM. As the aliens joined the evacuation effort, the polis and habitat governments had taken the cream of Earth—the intellectuals and artists, craftspeople and technicians, the wealthy. Mars had taken scores of millions regardless of their qualifications; however, the economy of the imperfectly terraformed planet had put an end to their generosity long before all the planetary spaces had filled.

What would peasants, prisoners, auto mechanics, asylum inmates, well-farers, fast food-clerks, or high-school dropouts do in space? They became grainers, of course. Nobody had expected the grainships to be *permanent*. Nobody had expected to be stuck doling out charity to our millions forever.

Folks had simply burnt out. Compassion fatigue, the experts called it. It was so very easy to understand. So very difficult to accept.

Eventually, I depressed myself into a dreamless sleep. It was the only escape you survived.

I dined, not in the VIP mess where the mayor held court, but in the hold mess. I fancied it kept me in touch with my peers. On the tail-end of the charity rations we'd received from Deimos Habitat, the meal consisted of a watery potato soup, half a baked beet, and a johnny cake. Synthetic OJ, even more watery, tasted of vitamin and mineral supplements.

Jeff loitered in a corner as I went through the line. I noticed him craning his long, delicate neck long before he saw me. As soon as I sat, he scurried over and crowded onto the bench beside me.

"You should have fired me yourself," he grated.

"That's true, but I like you too much. This is for the good of the ship. I warned you when we had that reactor crisis. A captain doesn't have the luxury of brainlock."

"What will I do? I flunked the scholarships."

"Study harder and try again."

"It's not that easy," he whined.

"Easy shouldn't be in a grainer's vocabulary."

"Don't call me that!" Tears cascaded down his face.

Everyone at the table concentrated on their meal. Life in the sardine lane taught you not to witness personal meltdowns.

I understood how he felt. During my service with the Dyb', the glory jobs had passed me by. Most of the war I'd spent flying transports with no opportunity to shine. I'd wanted to be a grainer hero so bad. That would have showed the real worlds.

Chunks of supplement in the OJ caught in my throat.

"I'll talk to the mayor about getting you a job on his staff. Nobody wants you dangling in the wind, Jeff."

I finished my meal and left, wearing my depression like a cloak. The bridge was empty. Crawling into my padded control pit, I went down the list. The basic systems were built as sturdy as the pyramids, but double-checking was a pilot's first duty.

I scanned my e-mail. New Albany had shifted our resupply to a week Friday. They, too, were predictable.

I flatlined for an hour, staring at blank screens. An unauthorized use of an airlock set off an alarm. By the time I checked, the computer had logged the suicide of Grainer 11.459.758. I rotated cameras until I caught sight of the corpse. After crunching numbers, I filed its flight plan with the New Albany controller.

Actually, we hadn't suffered a suicide in three weeks. We were overdue.

Another aspirin, and I pecked into the masterputer to check my apprentices' sixteen hours of simulations last week. I'd have to decide whom to promote to lead apprentice.

Lucy earned slightly better scores. She had a knack for navigation. However, she was sleeping with Qin's brother. Rumors of favoritism were hell in the sardine lane. Rubbing a couple of rumors together could spark a riot.

Tae had an advantage with reaction time, which often got him in trouble. Still, a lightning, albeit wrong, decision was better than Jeff's frozen nondecision. Unlike my long string of apprentices—most of whom jumped ship the instant they mastered a marketable skill—Tae had sailed through his scholarship exams, then refused a shot at the University of Taylor. That puzzled me. Granted, he would have had only a one-in-a-hundred chance at passing their entrance exams, but the opportunity was pure gold. Martian colleges lined up to recruit Taylor's rejects.

I would have to find out why. Later.

Walking. I used maintenance tunnels, avoiding the twenty-four-hour chaos of the residential mazes, even if carrying a lantern was a pain. Besides, I could stroll through the engine complex and log it as my weekly inspections.

Tae was sleeping atop the shroud of #2 grav engine. It amazed me that he could keep his balance on the sloping structure. The stench of petrolchems and ozone was thick as a London fog. How could anybody sleep in here?

His poke, a Martian potato sack, was on the deck. I untied the shoelace sealing the bag and dug inside. His life was profiled in documents within a worn folder wrapped in plastic. Two clean jumpsuits were neatly folded below a layer of sock-shoes. Picture cubes and a bar of chocolate were on top. We hadn't gotten chocolate charity in months.

The kid had will power. That was, unless he was a mutant who hated choc. The bar was prime barter goods, but most of us scarfed ours down the day we received a personal charity package.

I retied the poke and crept from the chamber. The entire time I was inspecting the reactors and gravs, that folder nagged me. I kept my personal records in my coffin's lockbox. They were hell to replace. Thieves loved to get their hands on them, especially the papers of a golden boy like Tae. Lots of folks wanted a new identity in the hope they could escape the grainships.

Why would anyone carry their papers with them? Tae wasn't stupid.

I went back with the intention of waking Tae and demanding an answer. However, he was gone.

The New Albany health team arrived at 11.00 hours Standard. Why did they call them *health teams*? They were looking for diseases, preferably TB-3 or kohly epidemics, anything to give the polis a legal reason to refuse us docking rights.



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SCI FICTION

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Mayor Qin was busy, so I got stuck with escorting them. A doctor, med tech, and two armed guards followed me through the holds. They selected people arbitrarily for blood tests, prods, and assorted medical voodoo. As the news of the roving vampires raced through the holds, I was reduced to knocking on coffins and forcing my people to volunteer. Twice, the guards dragged victims to the tests.

I kept a list of the victims. Once I got back to my cabin, I'd open the crate of Spam I'd purchased on Turin Polis and reward them.

No sooner had I sealed the airlock and waved good-bye to the team than Jeff stepped from a dark corridor. I saw the flash of steel and contorted. The knife thudded against my ribs. My momentum carried me around, giving my fist plenty of swing. One blow to the nose and the yerp fell to the deck. I hopped backward, then kicked his face.

There was something satisfying about leaving an attacker thirty kilos heavier and twenty-two years younger unconscious.

That was, until I saw my blood.

Yanking the blade free, I walked toward the sickbay. Anger lent me strength. Almost made it. Irony being my best friend, I broke my nose when I passed out and splattered into the deck.

"Stay down," ordered Doctor Marquez.

It irritated me that he pushed me flat with such ease. Most of all, it irritated me when he said, "Don't move. Give the cobwebs time to stop the bleeding."

"Cobwebs?"

"Boiled. Perfectly sanitary. Don't you worry your pretty head, Captain Talce. It was a lucky wound." He started to wrap a grotty-looking gauze around my chest.

"Whoa! That's a recycled ban—"

"The gauze has been washed and autoclaved. Quite safe. Trust me, I'm a licensed witch doctor."

I coughed, wondering who'd relayed my little quip to the man. My mouth moved without making words. Only then did I notice the numbness.

"We're out of morphine, if I remember the supply vouchers correctly. What—"

"Trust me, you don't want to know. Let's call it an old trade secret. Millions used it safely."

I hadn't been naked with anyone in a long time. The stupid giggle I couldn't stop only exacerated my discomfort. I would have wiggled off the table if he hadn't seized my nose. THAT I could feel. A hiss was as close to a scream as I could manage.

"Do you want your nose fixed? I think the break will give you a dash of character. You could cut bread with your old nose. Why don't we leave it for the time being? I can fix it later, if you don't like it."

Qin stormed into the room, his puffy lips pale with rage. "Who did this? I'll airlock the bastard."

At 1.6 meters, I seldom felt tall except when I was hanging with the pudgy mayor. However, he had a way of yelling himself two meters tall. I half-expected him to jump up and down with steam pouring from his ears, like a cartoon character. Marquez, peasant-strong, frogstepped Qin out of the examination room. While I slipped into my bloody jumpsuit, they yelled at each other. The blanket covering the doorway swayed.

"Who did this to you?" yelled the mayor upon his return.

"I slipped on a banana peel. It was no big deal. Let it lie, mayor."

He smiled at the mention of his title. His rank always brought a smile to his lopsided face. If he broke into a show tune, I promised myself a little therapeutic strangling.

"Aw, why do you get this way, Alicia? Simply tell me who did this and we'll dump them out an airlock. No muss, no fuss."

"I slipped and fell. End of story. I'm going home to sleep for a few days."

I almost made it to the doorway before I collapsed.

I couldn't sleep. Even unconscious, I was restless. Drinking that nasty herbal tea Doctor Marquez prescribed didn't help. My eyes wouldn't focus well enough to read. The TV commercials from New Albany only reminded me of what my people didn't have.

Guilt. Commercials were the favorite part of programs for my peers. They wanted to see what they couldn't afford. I could buy it all, but my soul rotted over that ungrainer potential.

In the end, I had to walk. Jeff might go berserk, but he wouldn't stay that way. The kid was a level at heart, not a tilt.

It wasn't a walk as much as a limp. Nonetheless, movement ameliorated the worst of the pain. I went into the tunnels honeycombing the 541's hull. One eye stayed on my watch/geiger. The wrist gadget was Irlane in origin. Unlike the Dyb', who built sturdy and idiot-proof, the alien Irlane built sturdy and impossibly complex. There were modes and abilities of the device that I'd yet to master.

I wore it every day, but seldom looked at it. The triangular watch roused too many memories of James. His transport blew a stabilizer feed as he was docking. The gas rocketed, changing the vessel's slot a few meters. He'd almost compensated when the collision occurred. Captain James Digg was the only casualty, three days short of going home. When I returned to base, his duffel bag was waiting on my bunk; he had made me his next of kin. I still had a box of his picture cubes and papers, but I hadn't looked at them since that first day back on my grainship.

Of course, his insurance made me richer, and more guilty.

I couldn't remember James's face. My chest cramped. His soft, talented hands were still trapped in neural amber, but his face was gone. That agony of forgetfulness washed out the mere pain of my wounds.

Sinking to the deck, I tried to remember how to cry.

Keep moving, I told myself. My stride grew longer, defying the wounds to hurt.

I turned a corner and came to a stop. Tae was sleeping atop a pile of netting. My pain erupted as rage. I kicked him awake, all too aware how feeble my blows were.

Tae rolled off his ersatz bed, coming up in a fighting crouch. Trapped in the ring of my lantern's light, he blinked like an owl. He darted, grabbing his own light.

"What the *hell* are you doing here?"

"What happened to your face, Cap?"

"What kind of moron sleeps in the hull?" I screamed, kicking the netting. Holding up my geiger watch, I was relieved to see the rads were minor. "You trust the Jensen shields? You *want* to be cancered by radiation? There aren't any alarms out here. What if there's a solar flare? You could get a fatal dose!"

The kid shrugged. His sheepish smile communicated the indestructible illusions of an eighteen-year-old. "I checked the forecast. It's gelid."

"Gelid, hell! I've seen these tunnels reading 450." I kicked the netting. "Kill your fool meat in an hour! Why aren't you at home?"

I saw his burlap poke. Memories from the bad old days reared. In the early days, criminals had driven people out of their coffins to have more space for their illicit lifestyles. After vigilantes airlocked a few dozen of the culprits, the practice stopped.

"Has somebody hijacked your coffin?" I asked.

"No," he snapped. Indignation turned his face to granite.

"Talk to me now or talk to Qin later. I'm not in the mood for games, Tae."

"It's not what you think. It's my g-girlfriend, Giselle." He blushed.

Had I ever been that young? My eyebrow cocked. "Well? I can't read minds."

"C'mon, it's easier to show you than explain."

"This isn't a flesh biz, is it?"

"NO!" It was the first time I recalled Tae ever raising his voice. He blushed so hard I feared that he'd spontaneously combust.

My slow pace caused him to race circles around me, sometimes darting ahead and waiting. As if I didn't already feel like a dinosaur. His brown eyes seldom rose from the deck.

"Giselle didn't make the scholarships. She's not stupid. She stressed out during the exams. Damned Trade Commission should have let her take the KIC again. Gee—"

"Who's Gee?" I asked.

"Giselle pulled a 290 on the PWB. That should count for something."

"Never could keep all those tests straight. That's a 290 out of a possible . . . what?" I asked.

"A 300. Highest score on the ship. Top 10 percent of all Sol. And her STB and LMS were in the top 15 percent. It's not fair they won't let her take the KIC again. Gee brainlocked. Is that a crime?" He inhaled sharply, reminding me of Jeff.

I shook my head slowly. When I was young, the Dyb' were still hiring cannon fodder for their wars, but the aliens had lucked into a stretch of peace over the last decade. For today's youth, only Trade Commission scholarships remained to give them hope of escaping life in the sardine lane.

"She tried to airlock herself, Cap."

"Is that why you refused your scholarship?"

"I can't leave her here. The University of Deimos is willing to accept her, but she'll need money for living and tutoring and things."

"You're not going to show me a still or a dope lab in your coffin, are you? I sympathize, but—"

"Wait and see. I'm no crim, Cap."

"Stop calling me that," I snapped. "The name is Talce."

Cap had been, would forever be, James's beloved handle. The last thing I needed was to think about those soft hands and the face I'd forgotten. I tried to block the memories. In my mind's eye, his transport slipped in for another perfect docking. I didn't notice anything awry until the collision alert sounded from the Dyb' polis. My throat swelled shut.

We entered the aft hold. Shannon Town, its natives called it. Two-meters-wide lanes separated the rows of coffins not much room, considering the

ladders to the top rows. Every other coffin was set backward, so the sardines didn't have to be in their neighbors' faces.

A grill smoked in the middle of one street. I glowered at the elder stooped over it, frying sausages, then made Tae take the long way around to avoid a confrontation. It was too late in the day to be arresting fools.

Tae lived in a deck-level coffin at the end of a street, a prime location. He thumbed the lockplate and its hatch thunked open.

"This had better not be illegal. I'll have to report you, Tae."

"Rachel Carter gave me the idea. Remember the fad she started last year?"

I didn't. Who had time to keep track of the tilts and their fads?

"She built an electric oven and turned her coffin into a bakery. I don't know how she came by her original supplies, but once the ball started rolling, she got everything she needed. Rachel made major bucks."

"Now, I remember. The fire in Hold Three. I—" forgot what I was about to say as the stench of decay hit my nose. For an instant, I feared that Tae had transformed his coffin into a cemetery.

He opened the hatch wide. Light poured into the shadowy hold. Bending over, I counted three lightstrips glowing. A clear plastic tent filled the coffin. I pressed my face against it. Droplets of condensation rolled down the warm plastic.

"Flowers? You're sleeping in rad zones in order to grow flowers in your coffin?"

"You have to grow to sell."

A powerfully built man ambled up to us. "Captain," he said with a slight bow. "Greenie, got another of those purple things?" He grinned like a schoolboy, pulling out a roll of currency. Only a criminal would have that much cash. He peeled off half a dozen fifty-buck bills. Martian bucks? When had they come aboard? Our allowances from the Trade Commission came in hard currency, not soft bucks.

Tae contorted into his coffin, emerging with a small pot. I didn't recognize the delicate flower with its cup-shaped bloom. He handed over the flower and shoved the bucks into his pocket.

"Faye can't resist 'em," said the customer, favoring me with a salacious wink of a runny eye. He dashed off.

"You're the ship's florist?"

Tae laughed as he sealed his coffin. "I spent my savings on the soil and bulbs and seeds and stuff. It was a gamble, but you can't profit from dreams until you bring them to life."

"You can sleep on the bridge for the time being. I'm too tired to think right now. We'll discuss this tomorrow."

I wasn't sure how I got back to my cabin. In a blur, I crawled into my coffin and fell asleep in my clothes. For the first time in ages, I slept a full eight hours.

"Qin sent me," said Busey as soon as I left my cabin.

Ted Busey had been sitting outside my cabin like a patient hunter. We'd been lovers for a while last year. However, he'd been a child when Earth died; he knew nothing but the grainship. That had been a gulf far more profound than our age difference.

The security lieutenant was a lanky lad pretending to be a soldier with his short haircut and starched jumpsuit. He spent four hours a day in the

gym, yet had never used muscle when the brain sufficed. The pundits pegged the soft-spoken man as a future mayor.

I beelined for the mess, too ravenous to be bothered by my myriad pains. My jumpsuit was as rumpled as my soul. Luck allowed me to zip right to the counter and get my bean soup and johnny cakes. Guilt forced me to glance around before I fished a packet out of my pocket and sprinkled cocoa into the powdered milk to give it some taste.

Busey sat across the table from me. "Attempted murder of our pilot is genocide for the rest of us. There's nobody to take your place."

"Nonsense. New Albany would hire a pilot just to get rid of us. We're in a stable slot. There was no risk to the ship. *And* it was an accident. Leave it be, meka."

"Alicia, you could have been killed. Will you be so lucky next time?"

"There won't be a next time."

"Just because you shattered every bone in his face doesn't mean he won't come back."

"I have no idea what you're talking about," I said.

"It doesn't take Sherlock Holmes to solve this one. Jeff Koslek came into sickbay about an hour after you left. He *claims* to have fallen down a ladder. I'm having the bloodstains on his jumpsuit typed. If any of them are yours, I have a case."

"Maybe Jeff helped me off the deck."

"He's mentally unstable. I've been interviewing his neighbors. He's threatened other people with a knife. They IDed the knife Doctor Marquez found in your pocket as his."

"Jeff's not a tilt. I borrowed the knife. Leave it be, Ted."

"I can't. The mayor ordered me to make a case. I will solve it, with or without your help."

"It's going to be without."

I didn't bother appealing to our past. Lieutenant Busey had his orders. There was no altering his course. Stubborn birds flocked together. I concentrated on my food and he eventually went away.

After breakfast, I returned to my cabin. Pecking my computer, I perused my bank accounts. Enlistment and demobilization bonuses—not to mention that heart-rending windfall from James—had grown into a tidy packet. By the time I left the Dyb' service, I had the assets and vocation to become a citizen virtually anywhere. Instead, I came home.

A grainer with obese bank accounts. How life enjoyed irony!

I stared at the numbers for the longest time. If I spent every penny, I couldn't make a difference to my peers. There were too many of them; their needs were too great. It would be like bailing out an ocean with a bucket. My deepest, darkest secret blinked at me. Those numbers accused me of having dreams, of having options that others did *not*.

Tears came from nowhere. A few keystrokes later, I'd opened a new account at the Bank of Deimos.

The bridge was empty. I slipped into my pit and ran the checklist to kill time. It took no end of adjustments to bring the oxygen levels up in Hold Two. Where did the fools get the charcoal? Why did they have to cook their snacks?

My e-mail included a communiqué from Supervisor Ford. As punishment for our near-collision, we would not be allowed to dock. Instead, a shuttle would deliver our mandated charity.

"Now to give the supervisor an education," I muttered between laughs.

I dropped a message to the Trade Commission. My protest insured that one of their field agents would inspect the supplies shipped to us. That meant that New Albany would have to be extra generous to please the powerful commission. Had we docked, they could have, *would have*, shorted us. Now, they'd be stuck.

And maybe my peers would run out of charcoal until our next scheduled docking.

I checked Tae's ship account. Barring a major devaluation of all those Martian bucks, his account was perched on the edge of five digits. That placed him in the top ten richest people on the 541.

Tae strolled onto the bridge. "I want to thank you for letting me sleep here. First good night of sleep I've had in weeks." He plopped down on a barca with a long sigh. "It won't be for long. A few more months max."

"The young and indestructible," I mused aloud. "What happens in a few months?"

"I'll have enough money to send Giselle to Deimos. As soon as that happens, I'm out of business."

"You've blown this year's scholarships. Will you submit next year at Deimos?"

"They won't allow more than one grainer from a given ship in the same college. Our rep for rioting is poison. I think I'll try Taylor and go with one of the lunar schools when they reject me."

"Then you'll transfer to a college closer to Deimos?"

"It'll be too late. Gee's not the waiting kind. She'll have, she'll *have* to have, somebody new in a month or two. Her mind is all messed up; she has a phobia about being unattached. When she gets lonely, it depresses her, and she has to fill the emptiness with drugs. That's how those binge cycles snag her."

"Am I missing something?" I asked. "You love her enough to sleep in rad areas, right? Enough to blow off your scholarship to be with her, right? So, you're sending her off knowing she'll fall in love with somebody *else*, right?"

"Has to happen sooner or later." He punctuated his sentence with a long sigh. "Once she gets a degree, she won't be coming back. She hates everything about being a grainer. Me, *I'm* coming back. If we don't bring our skills home, things will never get better for our people."

"I don't—"

"I love her more than I've loved anybody in my life. If she stays, she'll burn to a crisp. So I *want* her to go. That's her only chance at being happy. More than anything, I want her to be happy. You see, it's the only thing I *can* give her that's worthy of our love."

"Kids these days," I muttered, hoping his idealistic nobility survived longer than mine had. "How much more do you need?"

It was his turn to be nonplussed. "Huh?"

"When New Albany sends out our supplies, I'll request a bank teller. We need to get your currencies exchanged and locked into solid dollars. The polis bank can transfer the funds directly to Deimos. Let's say you have nearly ten grand now. How much more do you need? Tae, this isn't rocket science. How much?" I snapped my fingers, wanting to rush him before my common sense kicked in.

"I was hoping for 30K."

"In what currency?" I asked, relishing the power of my captain's voice.

"Huh?"

In our nomadic existence, certain realities failed to penetrate into our hot-house culture. The concept of hard and soft currencies appeared to be one of those realities. It had never occurred to Tae that Martians offered a 10 percent bonus for L-5 or Nok dollars deposited in their banks.

"I'll see to it that the rest of the money is deposited in an account under your name." I didn't bother with the Martian tax issue. It'd be easier to pay them myself than explain the byzantine system.

"I can't take—"

"Shut up!" I slammed my fist against the padded wall of my pit. "I'm going to call the Trade Commission and see about getting you two advance enrolled. Deimos for her, maybe Stanton or another Martian university for you. It'll do you good to have some dirtshoe experience. And you two can have weekends together."

I climbed out of my pit and walked over to the kid. "This is the deal." I bayoneted his chest with my finger a few times to still his protests. "If you and your lady love maintain a 4.0 average, the debt is paid. If you come back to us, after graduation, the debt is paid. If you don't, my friends will sic a collection agency on you two for every penny at 8 percent interest. That's the deal. No quibbling."

I turned around, so the kid wouldn't see my smile. "Now, get the hell out of here and begin your going-out-of-business sale."

"But—"

"NOW!"

I limped to my cabin and brewed an entire pot of coffee. The luxury failed to rouse my guilt. I'd worked hard for it. As I sipped, I summoned my bank accounts onto my terminal. How long had I been hoarding my affluence so that my peers wouldn't suspect, wouldn't condemn me as an outsider? The transfers to Deimos had barely dropped the numbers, yet two lives would be changed.

Would Tae come back? He'd have to be crazy to even consider it.

I toasted his lunacy and love. Then I raised my mug for poor Jeff. He had deserved better.

Didn't we all. ○

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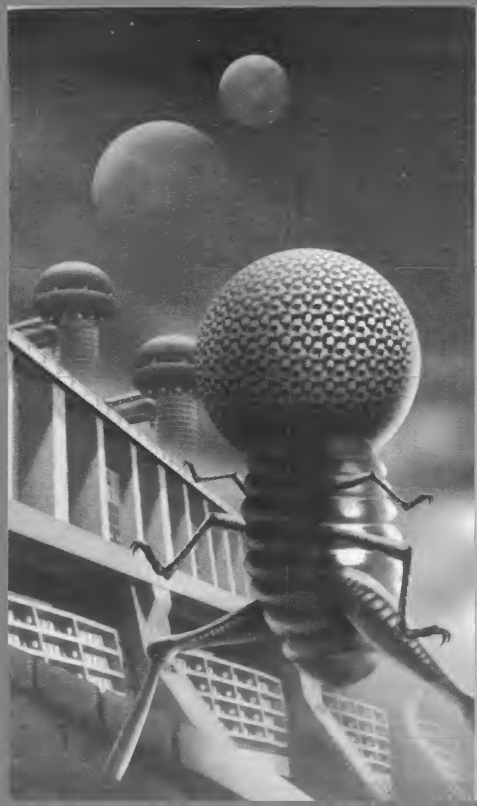
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Jim Grimsley

Illustration by Allen Gurne



This is Jim Grimsley's second *Asimov's* story dealing with the universe of the Hormling, a very complicated civilization of future humans and their offshoots. He tells us it's his first ever fictional attempt to write from the point of view of a rock. By the time this story appears, he'll be traveling to promote his book *Boulevard*, but will mostly be looking forward to returning to the Hormling merchant empire for his next SF novel.

Beneath me in space hangs a growing crescent of light, the yellow, nearly uniform surface of a planet with no more than a thin nitrogen atmosphere for clothing, not a cloud to obscure the surface, where, if I choose the right instrument, the right sensor or monitor, I can see inside the enemy cities on the sunny part of the planet, all the way inside the silica structures spread out like spider-webs across the pale dust. I watch the Seldene colony, the fifth planet in our system, my part of the war effort. I fly in space. I listen and wait.

My home planet, which I have never seen, is the second from the sun, settled by the Hormling long ago—and at great expense, we might add. This is something a Hormling administrator might say, for the Hormling have a lot of hackneyed expressions concerning money, and have remained most cost-conscious even during the long war.

The first settlers named our planet Oxtail, no one remembers why. When we came here, there was no Seldene colony, but four hundred years ago, their ships appeared and took over a planet we had no way of using ourselves, establishing a colony that grew far too quickly for creatures with a birth-rate or rate of evolution anything like our own. With us across the solar system, watching.

Two tiny moons orbit the yellow-red sphere. Their names in the Seldene language are impossibly swift flickerings of light; we call them One and Two. Both were used as shipyards for building warships in the early years of the war. Just now, a cruiser hangs in the dock near One, the cruiser scarred from some battle, undergoing repair. The presence of the warship is news, and I am watching every movement of the repair crews with keen interest. After years when nothing has happened, suddenly into the harbor sails a breath of the fighting.

When we first got word from the outer sensor ring that the ship was incoming and decelerating toward One, I felt a flutter in my stomach, a kind of fear I've never felt before. We have been at this war for three hundred years-standard; it has become a way of life, and we monitors who keep the watch on the Seldene planet think of ourselves as guardians. The war itself is spread over the hundred-and-some light years along which the nine settled Hormling star systems range, a long and ragged line of worlds that we have managed to find that are worth the extravagant effort of colonization and trade. We believe that the Seldene have settled no more than a dozen worlds themselves, most of them in this region of space, though we're certain of the location of only three of their worlds. Our ships travel no faster than light, and neither do theirs. So that for long stretches of time the war is very far away, and for us, it is as if there is no war at all.

Two of us in this watch station, Hector and me. Hector is the all-about-work who takes care of the maintenance, and I am the synthetic, Ana. We fly in orbit far above the stark, pitted world in a tiny station of three chambers, disguised as a rock sailing through space, shielded on the interior to prevent the Seldene from seeing my electronics, with just enough engine power to adjust my orbit. I circle the planet every two weeks, and other stations take up the watch of the sunlit side while I orbit through the dark, keeping my eye on the starkly lit cities through their long night.

My inner chambers are for Hector, mostly, since he needs some room to maneuver; I suppose the rooms must also have been useful during the station's construction, which was long before I was alive. My memory goes back only about five years and my protein matrix will last only a decade more;

after that one of the other synthetics will come on-line and take up this post and watch in my place.

Hector needs no replacement, breaks down but fixes himself, fixes everything else that goes wrong, a reliable all-about, the kind of machine the Hormling build, technology to last till there's no need for it any more.

I think of Oxtail as my home, just as I think of myself as a Hormling. In fact, I am not legally human at all; I am a protein overlay to certain electronic components of the sensor station I inhabit, and my mission is to provide Hormling sentience and awareness to the task of watching this monotonous waste of a world.

So that, for instance, when I study the cruiser at dock, the immense hull all curves and twists, two dozen oval pods bound together by scaffolding with guns mounted on the scaffold and engines on a boom fore and aft, counting the two dozen guns I can see and recalling the other two dozen I cannot, while my innards record every kind of image of the ship and scan every type of radiation coming out of it, while I am watching all this, I am also full of anxiety about it, not at all machinelike, but instead deeply concerned, and the Hormling prefer this, we Hormling *choose* that some feeling should be present in the data.

Not to mention that it is Hormling law that complex, near-sentient machinery be governed by a human consciousness, or a reasonable organic facsimile thereof.

Hector gave me the name Ana because he had to call me something, he said. For the same reason, I have decided that he truly is a he, though he actually looks something like several waddling metal cages full of electronics, waldoes, field manipulators, spare parts, and other gear needed for station maintenance. Hector has kept us flying for nearly sixty years-local, and I am the fifth synthetic to work with him. He functions efficiently and possesses enough artificial intelligence to put together a decent conversation. As good as most people I know, I think, and I have the thought without any feeling of contradiction, though of course I realize I never *actually* knew anybody, I only have the *impression* that I did. A cloned consciousness is made that way, to have the feeling that it's human, that it once walked around in a body, and, in my case, that one day I stepped onto this sensor station and flew away on this mission; but, in fact, we're creations, a web of cerebral tissue suspended in nutrient jelly that jiggles like a blob of fat, covered with something like skin and suspended in a titanium shell, with several thousand mechorganic links between the station and my thinking parts. I am a few million neural cells stamped with a consciousness that feels, nevertheless, completely genuine to me. I think of myself as part of the *we*, not part of the machine, more Hormling than not. Irrelevant to me that I was *made* to think this way. To serve a passionate purpose, to float in space, to watch, and silently, secretly, to stream this data I gather across emptiness to the little point of light that is Oxtail, my home—which I have never seen, as I said, although I have the impression of having done so, and memories of the place.

"You're alive if you think you're alive," Hector says.

"Do you think that woman was my mother?"

"What did you say she was doing?"

"Bending over me, looking down at me. I was lying in a crib, I guess. She had dark hair."

"You were lying in a crib."

"Yes."

"That's like a bed, for infant children."

"Yes."

"Maybe she was supposed to be your mother."

Hector is working. Running systems checks on the power couplings in the metabolic unit; I convert sunlight on my rock skin into energy for the use of my internal systems, a sensation that I perceive as warmth, and these last few cycles, I've been a little chilly. The solar converter is passive Hormling technology straight from the mother world that will last a very long time, but the rest of my internals are the usual local stuff in need of a lot of maintenance, various kinds of light and microwave and sound and x-ray and other kinds of radiation sensors, devices to allow me to see everything, each tied to my consciousness as if it were part of a body that never existed, although I am imprinted to think that it simply no longer exists. That it *was* here once. I feel a stomachache, and Hector checks the nutrient levels in my layer of jelly. I feel a headache, and Hector tests the hydraulics that move the lenses of some of my visual-light array, or one of the pivots of a surface antenna; I feel the malfunction as pain, and Hector fixes me right up.

I can watch Hector if I like and can keep an eye on any of the internal monitors at the control stations that nobody uses any more; at times, it's as if I'm at the helm of a ship, and I see myself as a short, thick-waisted woman in a faded flowered shift with drooping socks, cloth slippers, and curly, mousy hair. I was never beautiful, I think, but I'm not unattractive. I am this older woman with her arms crossed, calmly sailing through space, captain of my craft. Though to have this kind of self-image can be confusing, since I'm watching so much else at the same time, the whole sphere of space on all sides, thundering emptiness, stars big as fists, every kind of radiation streaming out of them; the universe a very busy place. Me hanging in the midst of it, floating alongside the planet we call Max, for reasons we don't remember any better than we remember the origin of the name of our own world, or where the name "Seldene" came from.

Better not to fixate myself too specifically on any one appearance, I remind myself sometimes, since I am actually a rock.

We are worried, Hector and I. To be more accurate, *I* am worried and Hector is trying to be. His concept of war approximates a sort of large-scale power outage, and his idea of an enemy is a malignant malfunction impossible to track down. But I talk to him about the war sometimes, and about other subjects sometimes, because I am a person and need to hear my own voice.

"This could be trouble."

"This ship thing, the big machine you're watching?"

"Yes, Hector. It's a warship. There hasn't been a warship here in ten years."

"And that's a long time?"

"Yes, it is. That's before I was turned on."

"Oh, my."

Hector has a flat voice, nicely modulated, but at times, the empty quality of his words spoils the fun of talking to him.

"You're worried about the machine," he said.

"Yes."

"But it isn't moving."

"No. But you remember when the Seldene were building a lot of these ships? Back when you were first assembled and sent out here?"

"That was a long time ago," Hector adds, and one of his cages has begun to make a rhythmic back and forth movement, as if he is jittery.

"But you remember?"

Hector never answers. Presently, he moves on to reassemble the metabolic controller, the complex of electronics that monitors the status of the chambers where my replacements sleep. Ten more of me, dormant but waiting for the moment when each of them will be called upon to serve.

Below, or in a direction that *feels* to me as though it might be called below, in one of my many kinds of vision, hanging against the same black curtain, the skeletal outline of the Seldene starship gradually drifts against the background stars.

Scarred, but from what battle? It must have come from close by, or else it would have gone to that other Seldene colony that we know about, fifteen light years from here, and this means that the fighting has come close to us. This is something we have to think about.

Somewhere, fleets of warships chase each other in the lumbering, slowly accelerating way dictated by the fusion-based drives that are the limit of our two technologies. If war fleets are close by, will they bring the war with them here? The full force of it, like two hundred years ago? Will more ships pour into the system any moment now? Filling the empty shipyards that orbit Oxtail and the two hollow moons of Max?

Three hundred years ago, without any warning, the Seldene began to bombard as many of our colonies as they could reach. But a fleet of ships attacking Shenal was completely destroyed, and the Seldene navy never again entered the home-world system of the Hormling, which let us know they were afraid of its defenses. So we went to work to make certain every world was as defended as Shenal, and meantime outlived the initial assaults, which were relatively few and far between, given the distances involved.

In our system, however, with the two colonies nearly side by side, there was no barrier to all-out war, and Oxtail was nearly wiped out before its defenses were completed. We are still recovering many parts of the planet from bombardment damage.

Why did the war begin? How do we even know it *is* a war as we think of war, which is, after all, a fairly civilized practice in that it pursues the goal of some civilization or other? The Seldene have asked for nothing, have never communicated with us at all. We have puzzled at their language and learned next to nothing about it, and one may postulate that they are equally ignorant of us. The Seldene communicate by modulating bands of light from fluorescent ovules built into their bodies; the various patterns of flashes of light transmit meaning in some manner we've studied but never understood. These light-flashes occur far more rapidly than the Hormling eye can detect, and it took us a long time to figure out that the creatures had any kind of language; at first, we guessed that the Seldene were telepathic. The Seldene communicate at a pace that is unheard of, for us. We believe their consciousness works much faster than ours does, too, that each Seldene creature processes *time* differently than we do.

The average Seldene worker matures in a few days and lives about four standard years. We have watched them a long time and in close detail and we know this to be true. These years are not short to the Seldene, we be-

lieve. To the Seldene, life seems long, we guess about as long as ours does. Expanding their cities, their colonies, at a pace that seems everyday and ordinary to them, their evolution moving along ponderously, from *their* point of view—but seen through our eyes, the Seldene live and die very fast.

For a long time, we doubted who or what they were. If we had not seen their ships, we might not have believed in their existence at all. They are tiny, the size of spring midges growing to the size of fireflies, and it takes a fair-sized cloud of them to make a consciousness. They work in groups of a few hundred to a few million, as in the cases of the huge flights of them who assemble their starships. Each unit of the flight is one flickering light capable of handling a certain number of simple tasks and communicating a few simple ideas. In some way that we do not understand, these workers and fighters and all the other specializations aggregate to form a more complex personality from the collective group that stabilizes, sometimes for a decade or more. The Seldene form no single communal mind, but instead millions of these cluster minds, and some of the minds contain millions of Seldene units all by themselves. The average is less, in the hundred thousand range.

Cities full of these beings, growing and changing, societies forming and falling, a civilization moving at an incredible rate.

"Bugs," I say to Hector. "Insects."

"I know. You've told me that before. But then you say they're not bugs."

"They're not. They're silicon-based."

"We have number of silicates on board—" for a moment he could almost be excited—"but none of them are alive."

I am watching some flickering of color across the eastern city on Max Quadrant Three. "They still remind me of insects."

"They always will. You're set in your ways, Ana."

"Maybe they *are* bugs, maybe they don't think at all. Maybe they're nothing but programming."

Hector has nothing at all to say to that. He rattles and waddles away.

For the second time, I see light over one of the Seldene cities, suddenly erupting, followed by what can only be explosions. These occur with incredible rapidity, in a line, as if someone has set off bombs in rapid succession, and soon the thin atmosphere of Max is cloaked in dark dust.

Over the cruiser, swarms of repair crews move without ceasing, clouds of light that I am recording, nevertheless, with pinpoint accuracy down to the level of the individual Seldene worker or soldier unit.

I have already linked this information, and it is streaming the seventeen-minute current distance to Oxtail, but this leaves me with plenty of time to reflect.

Hector repeats my words when I tell him. "Their cities are exploding."

"There must be fighting."

"Who are they fighting *with*?"

"Each other."

"Do people do that?"

"Yes."

He thinks about that. "Do you see any bodies?"

"What kind of bodies?"

"Bugs. Dead ones. Like, now, when you look at the cities. Do you see dead Seldenes?"

I think about it, and find some footage in visible light, some other stuff in

infrared; I show him some bodies in the smoking pit opened in one of the cities by one of the explosions. The Seldene worker doesn't look like much. A long thorax and a swivelly head that's all eye. Various numbers and types of legs according to their tasks, including some workers who sit fixed in place with no legs at all. Every variation you can think of. Even winged ones that are light enough to fly in that thin atmosphere.

"They look pretty," Hector says. "Like the cartoons."

We receive streamed net entertainment, and sometimes I play cartoons for Hector, to help his speech get better.

"They all look the same," he says.

"Some of them look different."

"Yes, but they all look the same, too."

We are very tangled up by this point. Hector is slowly raising and lowering his cages from a scaffolding to watch the footage I'm showing. I think he's stuck. He starts over again. "But they look pretty. Like the things in cartoons."

I feel the change when my new information enters the Oxtail data stream and gets bounced back to me, thirty-four minutes later, and when the news is in turn broadcast outward from Oxtail along the line of colonies to the home world. Each colony broadcasts data updates continuously and receives the same continuously from all the rest. We are bound together by streams of information that flow constantly outward in all directions to the interstellar data mass, amen.

So possibly already on the way to us in the streams of data moving at the speed of light is information that other Seldene colonies have undergone similar convulsions.

Or, I reflect, possibly there is information that the war is over already. Which we won't hear for many years, or which we might receive tomorrow.

Or, on the other hand, maybe *we* are the ones who are getting the news. Maybe this Seldene outpost is the first to erupt.

Soon, along the link from Oxtail to me, is passed word that other ships are incoming, detected seventeen minutes ago on Oxtail from data broadcast from the outer sensor ring nearly three hours before that. Meaning that the ships themselves have been entering the system for three hours and seventeen minutes already. Decelerating on a curve that at first we fear will bring the ships to Oxtail. But the data becomes clearer as the sensor ring begins to feed information steadily, and we understand that the ships are Seldene in profile, two of them, headed for Max; and nearly exactly at this moment, below, the work crews as quick as a blink clear away and the damaged ship in dock begins to power up.

For me, these are only a few long hours of waiting as the ships cross the immense distance, but for the *Seldene*, what is this waiting like? For what seems to *me* like a reasonably rapid approach of two cruisers with their jet-tails burning like star points must seem much longer to creatures for whom one hour might seem like a day. In the same way, the ship below can only be brought to full power so quickly, can only move so quickly, no matter how quickly the Seldene move or think; the universe must seem like such a sluggish, unwieldy place to the Seldene mind!

The dance that follows consumes more hours. The damaged cruiser is slow to maneuver out of dock, slow to accelerate; it attempts to escape, but cannot get up much speed before the incoming ships catch it and match course.

The two cruisers pick the third one to pieces with rail-gun fire, mass drivers, and short-range lasers. This is the Seldene fighting themselves, not us.

Visual light yields nothing after a while, but, correcting with other frequencies, I assemble an image of the ships, the arcs of fire, the clumsy turns, jets firing this way and that, not random but seeming so to me at such a distance. Vanishing beyond range of my sight.

This is one of the moments for which we build machines like this one, like me. I am aware that I am watching the end of the war, I am watching the collapse of the Seldene. I am the Hormling witness.

The yellow crescent swells as I move along this silk wall of gravity, falling in this broad curve endlessly, as another city shows signs of upheaval, and another, so quickly it's like a chain of fireworks.

"As fast as that?" Hector asks.

"Seems that way. See for yourself."

But I have already shown him the cities exploding, if they are actually cities in the sense that we name a collection of people, a polity, a city; at any rate, I showed him the large Seldene structures exploding and collapsing across the planet.

"Well, that's something."

"Yes."

"You have to feel sorry."

Hector speaks this in the flattest of voices. I suppose he means that we will be out of a job now.

At the end, points of light vanishing into space from Max. Arcing from the surface like fireflies, millions of them. Who knows what they are? Little Seldene life-pods headed for someplace else? Or something else, something the Seldene *evolved* into, as fast as that?

"They were so cute," Hector says. "When you showed them."

I picture him as my old husband, stoop-shouldered, hair going every way, standing there all drooping with his sadness, but, of course, Hector makes a rattling humming noise and returns to some other task in complete ignorance of my fancy.

Within a short time, the Seldene cities are so much dust, and pretty soon the moons blow apart and it is done, as quick as that. The shock waves give me a few bounces and the feeling of a queasy stomach again. The debris hurtles past too quickly to dodge, so I trust to luck and hope that nothing large passes close. I set about making corrections to my orbit.

All of the transmissions, which we believe to be Seldene broadcasts similar to our own entertainment streams, all of these transmissions cease.

I continue to monitor scattered Seldene life forms here and there on the planet, but they move in no recognizable pattern. Machinery continues to function, the planet's orbital defenses remain in place.

A day passes. The information is saturating Oxtail and everybody is wondering what will happen next, when, without warning, we get word through the link that the ships have come back in range.

Decelerating again, this time clearly toward Oxtail, and so my news is delayed by seventeen minutes during the whole ordeal. I can see the attack across all that distance, not the ships or the arcs of their flight but the pinpoint lights of their jets, and, much easier to see, the flare of missile batteries firing, missiles and mines exploding. The first of the ships blows apart in the mine field, and the second is ripped to shreds by missiles. I can see that much with all my eyes, the bursts of heat and force, the x rays and gamma

rays from the nuclear warheads. I have no eye for the finer details, the Seldene cruisers breaking apart, all that skeletal structure twisted and ripped, some of it molten, flying into space in every direction. Did anyone escape, I wonder?

As days pass, some of the debris from the vanished moons settles into orbit around Max, a frail ring, somehow pathetic against the spectacular backdrop of all those stars. By now, it is as if the planet has been dead for centuries. Its defensive satellites have all shut down, even though the Seldene stopped tending them only a short time ago. The surface is dead as well.

Our orders are to continue here watching and reporting all that we see, which is nothing at all. Not a word about coming home. Though I suppose that was only another fantasy of mine.

So we wait, all of us. We believe the Seldene war has ended or is ending, and that the Seldene themselves are either evolving into some other kind of creature or else are destroying themselves. Ships are being prepared for a visit to Max to have a look around, to see what we can find. Given the difficulty we have had learning the little we know about these strange creatures, we have no expectation of any remarkable discovery.

In maybe a hundred years, we will know whether it's true or not, whether the war is really over or not, when all the streams of information from this moment flow from place to place along the Hormling chain of systems. Or maybe tomorrow a ship will appear, one of ours, to bring us the news that the last of the Seldene ships are fleeing from any part of space we need to be concerned about.

"I never thought it would happen," Hector says. "So fast like that."

"It was their nature, for things to happen to them very quickly."

He shakes a bit. He has taken to silences that seem to me to be almost deceptions, if Hector were actually capable of such a thing, as if he wants me to think he understands when what he really wants is for me to stop talking. But sometimes I can't.

"What if the war's not over?" I ask. "What if none of this violence has happened on any of the other places? But then that doesn't explain the ships, does it? The ships attacking Oxtail. Wanting to be destroyed."

Hector has turned to some other task and even goes to the trouble to shut down his vocal and aural processors, something he does only when he's very busy. But I don't think he's busy now.

In my head, I can once again see the sudden sphere of light across the solar system, seventeen minutes away, Seldene ships heading to Oxtail to die. At last the image becomes something I can understand, that despairing attack and the quiet afterward.

Across space hangs Max, or, rather, Max as it existed a few seconds ago when this light headed toward me; and across the solar system hangs Oxtail, or, rather, Oxtail as it existed seventeen minutes ago, and so on, and so on, for every star that I can see, light that has reached me here in this spot, that I alone have come to gather, that but for me would go on hurtling through space for who knows how long?

I am looking at Oxtail, wondering whether seventeen minutes from now I will learn that something has already irrevocably changed there, while I am here, waiting, watching the place where the Seldene used to be. Contributing my part of the war effort, till we know there is no war—if or when the news may ever come. ○

A SPEAKER FOR THE WOODEN SEA

Ian Watson

Illustration by John Stevens

Ian Watson has screen credit for the screen story for Steven Spielberg's film *A.I.*, on which Mr. Watson worked intensively with Stanley Kubrick. The author's first poetry collection, *The Lexicographer's Love Song*, appeared from DNA Publications last fall, and this spring his latest story collection, *The Great Escape*, came out from Golden Gryphon.





"Winter is the only proper time to sail the sea," Thurible Excelsior told me somewhat sternly, "once all the leaves have died and blown on to land."

We were atop the terracotta lighthouse at the center of Haven Bay. Not absolutely atop; we were up on the wooden-railed observation deck. Higher above us, masked by its heatshield, rose the fusion torch from the ancient starship that throughout the Winter would serve as a beacon to navigators as well as providing lighting for the town.

And also casting deep dark shadows, no doubt.

Must have been quite a job hauling the torch so high, using only wooden scaffolding and leaf-fiber ropes.

The Keeper of the Light was a tall, gaunt, wild-haired fellow with piercing blue eyes and a bushy blond beard. He wore a white robe of bleached fiber, pleats falling elegantly to his hard bark boots.

I gazed over homes of baked brick capped with glossy red tiles. Beyond the ochre warehouses and wharves, and the long line of berthed vessels resting on their skids or wheels, sails all furled, was what these people chose to call the *Sea*—even though it was entirely composed of wood.

The dying foliage formed a vast carpet of yellow, orange, crimson, stretching to the horizon, and of course far beyond. Already the Fall winds had stripped many patches, exposing rumples and channels, those closer to shore visibly polished by centuries of sailing. The prevailing wind ruffled my hair, and bore, like soaring birds and butterflies, leaves that had come loose. Soon the wind would strengthen and there would be a veritable storm of leaves passing by.

Out of sight to my perception even if I enhanced it, would be great swells and waves of wood much further away—standing waves, crests as high as hills, troughs as deep as valleys.

"In a ten-day," continued Excelsior more amenably, "I will light the beacon for the Festival of the Bare Sea. Then our ships can sail again."

When the fusion torch was lit, rising heat would suck in air as fuel—now that the torch was on a planet it no longer needed to funnel sparse interstellar atoms magnetically in to itself. The self-sustaining output would run at perhaps quarter-power, like a tethered engine undergoing a test. I wondered whether a bribe to Excelsior might indeed help me. After all, the Keeper of the Light had not said that sailing early was absolutely forbidden. What sort of bribe? These people were so set in their ways.

In the west, the local sun was descending at the end of another diminishing day. All the colors of the sea-leaves made the world seem upside-down, as if a glorious sunset occurred not in the sky, but below.

"Is there no exemption?" I asked.

"That would not be wise, Lustig Firefox. Aside from the risk of foliage-fouling or blind-wreck, the sea-worms are now mating before encysting themselves."

In my brain, the nanputer Companion who translated his words for me and who molded my own replies in the local lingo—she called herself Lill—glossed *blind-wreck* as a consequence of sailing without being able to see ahead clearly. As for *encysting*, I already knew that the marine woodworms—ranging in size from that of a baby's arm to twenty-meter monsters—overwintered by coiling themselves up in holes they ate in the wooden sea and sealed with resinous amber slime, a secretion similar to the stuff that plugged behind them the long tubes they chewed. The excretion of

shavings and dust plus worm-juices hardened quite quickly, restoring solidity to the burrowed bits of the sea.

Again, I marveled at this world. That the substances filling the tubes were richly edible to human beings, mother-lodes of manna of subtle or pungent flavor, depending on location. And that certain sea-leaves contained large amounts of a non-toxic analog of the monoterpene, thujone, a narcotic structurally similar to tetrahydrocannabinol, but far more potent. . . .

This had seemed a fine time to arrive on Wormwood. As the leaves dried out, so did the thujone concentrate itself and mature. I needed to harvest enough sea-leaves before they all blew away to be processed by the land-worms.

Easy-peasy, you might say. Merely land the shuttle on the sea.

Up in orbit, come night, my wormship would soon be a tiny star speeding across the vast black velvet that displayed many brighter, unmoving jewels. My ship was not, of course, wormlike as the worms of the wooden sea were—it simply opened wormholes between distant regions of space, so that I had stared at Haven Bay's fusion torch as at some heroic antique in a museum. Perhaps *simply* is not quite the right word!

How about merely?

Oh, the trick of wormhole travel was relatively easy, once we found out what it was. Isn't that the way with many discoveries? Here's what you do, fellow: you bang the flint on the stone and the spark makes fire, farewell to raw mammoth steaks forever. Ah, *now* you see the light—how did you not realize something so obvious for the last ten thousand years?

The trouble with knowledge nowadays is that there is almost too much of it in the hyperlibrary. Only after the final jump to Wormwood did my ship's brain discover that landing directly on the wooden sea is perilous. Apparently currents run through tendrils in the wood. Any substantial mass of metal descending upon that surface provokes an electromagnetic pulse fatal to sensitive electronics. I must set down on the "land" and hire a wooden ship.

"It's really important to me to sail soon." I repeated my earlier lie about my needing the leaves for scientific study at the Institute of Xenobotany on Mondevert.

Behold the leaves—yet I could hardly walk out from shore with a backpack! (Nor did I much like the news about "mating worms.") Also, the particular leaves I needed were not necessarily close to shore. I might need to rely on local knowledge.

"Anyway, Lustig Firefox," said the Keeper, "the wind from the sea is strengthening daily. Only when the sea is bare does the wind moderate and shift."

"Surely your ships can tack into head-winds," I protested.

"Of course. Why should they do so, unnecessarily?"

Conceivably the currents in the wood somehow influenced wind patterns, ensuring that the leaves of Fall blew on to land and did not clot the sea.

Thurible Excelsior's people had come here to Wormwood six hundred years ago by the slow, deep-sleepy method. Remote spectroscopy indicated a breathable atmosphere and other life signs. Yet when the colonizers arrived, they found their new world covered in solid wood—not vast forests, as expected, but a single, if varied, coat of lateral wood that had grown right around the world, save for half a dozen dirt-bowls the size of, say, France on

Old Earth. Perhaps I should say dirt-bowels; those were where untold millennia of annually shed leaves had blown, collected, rotted, compacted.

A world-ocean of wood with swells and troughs just like a liquid sea, except for its density and immobility. And the worms, the worms. Worms in the wood—and smaller landworms that subsisted on dead leaves, speedily processing these into a sort of humus-loam. If I looked inland, where homes faded from view into a flat landscape, and if I enhanced my vision, did I detect a certain preliminary writhing as the smaller worms got to work on leaves that had already gusted to their graves? In another few days I would not personally wish to be out there, dancing about, trying to steal a pitiful harvest of air-borne leaves from the busy worms, even if I were permitted to.

When I say *loam*, do not imagine rich fertile soil—but rather the paste used in brickmaking; whence the material for all the homes and the wharves and the lighthouse. Toxins in the loam inhibited the growth of any crops. Starvation had loomed for the first settlers until the discovery of the mother-lodes.

What kind of evolution could have given rise to this, as you might say, *single-minded* world of wood and worms and worthless soil? Wormwood may have been more richly various once, before the tyranny of the tree proliferated—using “tree” in a very general sense. Buried hundreds of meters below the surface, there might be evidence of a more ample antiquity. Undoubtedly, roots of the world-wood that covered most of the surface cut their way deep down into rock, seeking out aquifers and mineral salts. How else did rain occur on Wormwood? Transpiration from the trillions of leaves of the wooden sea begat rain clouds during spring and summer, just as evaporation did from a regular ocean. Beware the flash-flood that would course through channels in the wooden sea and could pick up a ship and float it and dash it against a hard reef!

But Lustig, during the rainy season no ship can set sail on account of all the leaves.

True enough, Lill. No one could sail through thick foliage—and because foliage still remained, apparently I could not set sail!

Foliage, thankfully, without stems that would grow into saplings or branches. No such overgrowth here. Only leaves. Many containing lots of super-thujone.

Yesterday, I had landed my shuttle on a scorched area near the edge of town, marked by a tall red obelisk, from the tip of which fluttered a hollow white tube that Lill identified as a windsock. This ancient device, used at airports to indicate wind direction, was irrelevant to spacecraft, but evidently marked this place as a landing zone.

If the Wormwooders had ever used gliders to get around, I saw none here nowadays, and the only spacecraft in sight at the moment was a partly dismantled surface-to-orbit cargo ferry. Bearded fellows dressed in dingy overalls woven of thick fiber were cutting up bits of the hull, for other bearded fellows to push away on wooden hand-carts toward a long low brick building. This area seemed to me more like a scrapyards than spaceport. *They have no other access to metals*, Lill reminded me.

Quite. Even common metals were rare, which is why I had brought lots of ingots of copper, tin, aluminum to serve as cash.

In the distance, I spied huge nets stretched between poles set here and

there around the terrain. I also spied small figures (*enhance and fix with glittering eye*) who proved to be boys and girls scampering about in pairs, each couple equipped with a net with which they sought to ensnare leaves fluttering by. It seemed a jolly game, with a serious purpose.

The way that the leaves dipped, then rose again, made me think that they carried a small electrical charge, and that ionization of the atmosphere was responsible for keeping leaves airborne longer than anyone might reasonably expect.

Basic tech level, the hyperlibrary said of Wormwood. Nevertheless, star-trade did take place.

My arrival brought most of the bearded wrecking gang over. Hair styles varied between long lank locks and the short chop. A couple of the men were holding what looked like saws with monomolecular blades. Those cut through steel like a wire through cheese. Prudently, I switched on an external speaker and introduced myself: Lustig Firefox from the Institute of Xenobotany on Mondeverte. Was it correct to park my shuttle here, et cetera?

Lill, already versed in the argot of Wormwood, did the talking. I proposed and she disposed my vocal chords and tongue and lips so that I uttered.

Upshot: welcome to Wormwood, feel free, delighted.

"Excuse me for asking, but what happened to the crew of that ferry you're cutting up?"

The Foreman, who proved to be the Spaceport Manager, assured me that the ferry, at the end of its useful life, had been abandoned by a cargo vessel. One of the vessel's newer ferries had returned the crew to orbit. My own shuttle would be absolutely safe. Wormwood received few enough visitors, let alone scientific visitors, to risk isolation due to any hint of impropriety.

A note on economics. Generally, only luxury items and rarities are traded between star systems (plus knowledge, which takes up no space in a hold, although it may be assigned a higher value than actual goods). Wines, liqueurs, gourmet delicacies, fragrances, pharmaceuticals, works of art, and so forth. Wormwood was a port of call thanks to some of its seawood being exceptionally fine aesthetically when cut and polished, and due to its powers of—shall I say—conductivity? Domestic furniture for export was an art-form on Wormwood, quite sought after. Connoisseurs and rich vulgarians alike believed that sitting on Wormwood chairs boosted the immune system, somewhat along the lines of wearing a copper bangle round your wrist. Apparently there was truth in this. Fine furniture, of wood cut from the sea, sustained Wormwood's external commerce. Electric chairs, you might almost say.

Reassured, I descended, to be gladly welcomed. The air was mild and crisp. In that depot, which housed cut-up engine parts and such, I was served a hot drink that vaguely resembled coffee. In return I offered round a bottle of good brandy from my carry-all, if only to confirm the hyperlibrary's note that no one on Wormwood used any strongly intoxicating substances. Just not part of the culture. Excellent, excellent.

"How do you celebrate?" I asked, pretending surprise.

The blue-eyed manager explained, "We dance and we sing. We whirl round, hooting."

Yes, they were a sort of Nordic Dervish people. Auto-intoxication by hyperventilating and dizzy antics and so forth. This world was austere—self-

reliance was very important, unsurprisingly—although at the same time it had its own way of partying and passing the time.

If these people practiced hooting and whirling, maybe this was a way of purging any ill effects of negative ionization. . . .

"I'm seeking scientific specimens of leaves. Lots of specimens."

"Leaves are vital for clothing and fabrics, yet they do so poison the land!"

"In a day or so, half our people will be out on the land with their stoutest boots on, harvesting the windfalls. It's quite a race between us and the land-worms, so all windfall belongs to the town!"

"Do you mean I *can't* buy windblown leaves?" This was extremely inconvenient.

"What, and *leave* us naked?" The gang guffawed. This was a splendid joke, the height of humor on Wormwood. *Quite witty*, from Lill, who was sensitive to the nuances of the lingo.

Hmm. Hmm.

"You would need to go to sea to get leaves," said a chap with a long nose from which the same bead of liquid seemed to dangle permanently over his chestnut beard. "Except, we don't go to sea, yet."

Cue the Keeper of the Light of Haven Bay. Cue the recommendation that I rent a room at *Home from the Sea*, the only hostelry in town. That establishment would be empty of guests at present, but would be airing its rooms and shaking out its bedding in anticipation of sailors arriving from the three other populated dirt-bowls of Wormwood. And in anticipation of marriages!

"There'll be Winter weddings," Drip-Nose avered enthusiastically. "Girls wanting to settle oversea. Later on, new brides a-coming to Haven Bay."

This system obviously helps preserve genetic diversity.

Aye-aye, Lill.

"Will these foreign sailors bring cargoes of chairs with them?"

Drip-Nose nodded so briskly that his drip flicked free, soon to be replaced by another.

"What do ships from here carry to those oversea ports, then? Surely not just local lads in search of brides?"

"Brides and new blood *are* important, but each land has its own way of cuisining—our foods are relished oversea. Then there's bark-boots, 'cause not all the sea yields bark, and our bark's best of all. . . ."

I walked into town past a brick works and joiners' workshops, and weaveries of sails and garments, and past many homes and dancing and singing academies, places of joyous discipline. Most of my ingots I had left aboard the shuttle, but my carry-all grew heavier and heavier. I wasn't used to porting stuff over such a distance. Carts and barrows were on the move to and fro, all propelled by hand. No powered vehicles of any sort, no draught animals. Was there a cat or a dog anywhere on this world, or a bird in a cage, or a fish in a tank?

This eco-monotony might cause an insensitivity to complexity. Paradoxically, it might also account for a complacent acceptance of me, a stranger from a far star, visible as such because of my distinct garb, a slick dark blue one-piece with lots of pockets, and my lack of facial hair. People did not stare at me—I was a human person; what else could I possibly be? (Actually, at present, I was human-plus: me plus Lill.)

A boy and girl came skipping by, carrying leaves between them in a net. The kids paid me more heed than did grown-ups, though they hardly gaw-

ped. Briefly, I entertained the notion, trading on innocence, of offering to buy their leaves. *About 30 percent of those leaves look suitable*, confirmed Lill. No, you should never accost children in unfamiliar places, lest you be mistaken for a Phile. *Surely not you, Lustig!* Even the smallest of my ingots would be an extravagant exchange for so few leaves. I needed to change an ingot or so into a bag of wooden Tokens, which I understood I could do at the hostelry.

Home from the Sea, its name painted in faded sooty letters above the entrance porch, was a large, two-story building of red brick with a shallow-pitched tiled roof, big wooden gutters, and lots of brick chimneys. The front would have boasted a view over the wooden sea except that all the windows I'd seen so far in Haven Bay were of stiffened translucent paper that admitted light, but no sights, since there was no sand on Wormwood from which to make glass.

By now, the local sun was sinking. In the lobby, I was warmly welcomed by a tubby, grey-gowned woman who ushered me to an exquisitely crafted chair—all the other furniture was far more utilitarian, although well-enough made.

"You'll be a star-sailor," she observed. "Rest and revive!"

After my tiring walk, what a pleasure it was to dump my bag and sit down. The woman hastened away and returned with a wooden mug of amber liquid.

"Compliments of the house! Enjoy our best brew!"

The taste was hoppy and happy.

"Please call me Ma Landlady."

"I'm Lustig Firefox."

As we chatted, I began to glow pleasantly inside.

Aside from the effect of the brew, as your body heat warms the seat, electrical resistance may decrease if semi-conductor lattices are present. . . .

"What do sailors do during the rest of the year, Ma Landlady?"

"Why, some weave, some make window-paper, some teach dancing, all manner of things."

"Ah, I thought some people might abuse brew or other things." I laughed casually. "Such as rolling up leaves and smoking them." Smoking would release psychoactive compounds.

"Oh, you star-sailors from sophisticated worlds! You seem to think that we lead a simple life here, but simplicity is beautiful."

Presumably, no one here smoked certain leaves. Did they even realize that they could? Some leaves, not others. That was a definite oddity about the world-wide-wood of Wormwood. Although continuous, it was by no means uniform throughout. Aeons ago, different, but related woods may have grown into one another, fusing together, but still capable of expressing a sort of individuality within the collective mass. Alternatively, the primal wood had diversified for some ecological reason, rather as an embryo gives rise to different organs.

If you really were from the Institute of Xenobotany you might have more idea.

I gestured at the tavern area of Ma Landlady's establishment that led off from the lobby. Tables, benches, and a bar. No sign of ashtrays.

"How horrid if there was a fug of smoke in there, as on some worlds I could name! All sorts of noxious weeds being puffed."

"Nay nay, not here."

"Lovely brew, this, Ma Landlady. It's made from?"

It was brewed from lode, following an ancient recipe handed down in the family.

How about distillation from leaves?

"Tell me, is a shorter stronger tippie available too?"

"Nay nay, hooting and whirling is strong tippie enough."

The blessings of simplicity. Evening was drawing nigh.

"How do you light this place and how do you heat it in the Winter?"

"As to heating, some seawood burns hot and bright—offshore to the north of here the fuel-cutters hew and prise. As to lighting—"

Ma Landlady hastened to bring a biggish wooden box. Despite her comment about this being a non-smoking environment the container appeared to be full of fat cigars! She chortled.

"Dried little-worms burn a treat 'cause of their resin!"

She plucked one out, spitted it upright on a wooden spike affixed to the wall, then hurried out of sight into the tavern area and returned with a similar spike and half-cigar, this one burning with a slow steady flame—which she held to the head of the first worm, setting it alight.

Lighters, matches, or tinderboxes must be rare here, so each building or a building in each street probably keeps one such candle permanently alight.

I forebore to ask about the daily lives of worm-catcher-driers. No doubt those individuals were much respected for their simple though essential activity. The Wormwooders might even hold a midwinter Festival of Light, where they hooted and whirled with burning worms in their hands.

Don't be snobbish, Lustig. A snob can be a fool.

True enough. Respect all the native customs and quirks.

Presently, Ma Landlady whistled and out came a fresh-faced, wispy-chinned lad in his teens, to be introduced as Young'un. Whether this was his given name or a title I couldn't say, and, since he had a stammer, understanding him was difficult even with Lill's assistance. Young'un took me up to my room, which contained a bed with a lumpy palliasse upon it and coarse blankets, plus a stool and a dressing table fitted with a disc of wood polished to a very high gloss, serving as a mirror. A spike attached to the side would hold a worm-cigar, although at the moment enough gloom still entered the room through the paper window to render objects visible. A wooden jug in an ewer awaited water; a glazed pot at the bottom of the bed, any overnight liquids and solids of my own manufacture. The blackened fireplace was empty, so I couldn't tell whether wood or charcoal would be burnt in it.

"How does Haven Bay gets its water supply, Young'un?"

"B-b-b-but—"

From rain butts?

From rain butts?

Young'un nodded enthusiastically, then made scooping motions suggesting big cisterns.

Maybe there is also a permanent lake or so in the sea. Excavating wood must create big hollows here and there.

I envisaged barrow-loads of water-barrels being pushed or pulled. But I had not come here to study a subsistence economy.

After Young'un had brought back the jug half-filled, and had left me, I

took my everlamp out of my hold-all and attempted to contemplate my face in a shiny wooden mirror. Now I knew why all the men here wore beards. Shaving would waste water, but more importantly, how could they see clearly enough to shave? No soap or such was in evidence. The Wormwooders wouldn't devote scarce metal to razors. To use an imported monomolecular-bladed tool risked guillotining yourself. I decided not to apply any depilator, but to let the stubble grow.

The tavern's menu, lettered sootily on a yellow board, boasted baked and boiled lodefood in various guises (no frying on Wormwood, due to lack of oil). As predicted, no guests other than myself appeared to be staying overnight, but a dozen or so bearded patrons were nattering and supping brew, served by a buxom blonde. Worm-cigars provided mood-lighting.

I ordered Pot of Delight, which Young'un presently brought to the bar counter, whence Buxom brought it to me. Delight was a pot filled with brown chunks in an orange gloop, the aroma quite enticing, the taste—as I tucked in with a wooden spoon—of duck and cinnamon with a finish of turmeric treacle. Odd, but top marks.

Since all customers were happily occupied, Buxom came over and plumped herself down opposite me.

She licked her big pink lips.

"Do you like it?" Like what, exactly? Did the drive to maintain genetic diversity include star travelers, even though genes might have drifted and the offspring of a liaison could be a sterile mule?

Judiciously, I said, "Delicious." She wasn't quite my type, but—

Careful!

"Are you Ma Landlady's daughter?"

She nodded. "I'm Bountiful."

So I saw, so I saw.

"Nice name. I'm Lustig Firefox."

"That's a passionate name."

It does have similar resonances in Wormwoodese.

Hmm.

"Is your father—" Living? Dead?

Her eyes glistened, with either rage or grief. "Poor Pa, he walked out to sea, and now no one in Haven Bay will marry me."

"Why would anyone walk out to sea?"

She lowered her voice. "To commune with the sea, so he said."

"Can you commune with the sea?"

"Me? Nay nay, of course not."

"I mean, can *anybody*?"

"Nay nay, it is a sickness of the brain in springtime. A few people feel this, but then they hoot and whirl and it goes away. Pa simply went away!"

"And no one here will marry you, in case you or any kids you bear are the same?"

"I need to marry a sailor. They all stay here, but either they know about Pa or someone wises them. So I am thinking," she declared, "that I need to wed a star-sailor. I would tell him about Pa, of course—if he was a fine man free of silly qualms he would not care. I want a baby!"

Nothing like nailing one's flag to the mast. Was Bountiful realistic or a bit dotty? Given the relatively short window of opportunity of shore leaves, and those only during Wintertime, I suppose Woodwormers made up their

minds about mates quickly and spontaneously. She seemed fascinated by my bare chin, as a fellow might be by a shapely tit on show, assuming he did not hail from a world where nudity is common.

When I rubbed my chin, I believe she blushed.

"I am trying to imagine your beard," she explained, and I thought she was lying. The exotic appealed to her. (A grown man with a naked chin!) This might be a variation on her father's mental oddity, and the locals were wise to be wary of wedding her.

"Wait a few days and you'll see my beard starting to grow."

"Oh." She sounded disappointed.

You should not have said that. She may come to you tonight. If so, you might confide too much.

It might prove useful to confide in Bountiful if she was a bit deviant.

More customers arrived wanting brew, which took her away from me. I thought of shoehorning myself into one of the groups of drinkers. But Bountiful might assume that I had promptly gone to gossip about her, and I did not wish to hurt her feelings, so I sat alone, reading my pocket-screen. I was coming to the end of a biography of the Earth artist Vincent van Gogh, he of the swirling colors, who latterly had taken to eating his own oil paints. Van Gogh probably did not realize it, but this was due to the terpene content of the paint—terpenes resembling the thujone in the absinthe of which he was so fond and which inspired his art. When intoxicated, van Gogh perceived colors, shapes, and sizes in a vivid new way. What a chair he painted! An ordinary wooden chair, but just look at it in the illustration. Here on Wormwood, they did make rather special chairs, mainly for export, though that was the whole of it. Seemed like a waste of potential genius.

And so to bed.

As soon as I slept, or so it seemed, Lill appeared to me in a fascinating new fantasy. I was a man hoisted by a time scoop from the past, from an era prior to nanotechnology, that had made bodily shape-shifting possible—in my dream, at any rate, not in reality, I hasten to add.

I remained inflexibly myself. However, my dream-guide and investigator, thirtieth century Lill, could become whatever she wished—regardless of body mass, an absurdity that I failed to notice so long as I was asleep. Normally, to solace me, Lill would adopt any of a variety of highly seductive and satisfying guises, and together we would engage in games in imaginary and imaginative settings. That night, Lill was protean, polymorphic, very versatile. Her guises flowed from one into another. I will not go into details, except to say that I was sated by the time the rattling of the latch awoke me.

I switched on my lamp. A wooden bolt secured the door. The latch moved up and down, clack-clack. Barefoot, I crossed the room. The air was chilly.

"Who is it?"

"It's Bountiful. I wondered if you needed anything. . . ?"

What I may have needed had already been fully supplied by sly Lill, preempting any possibility of repetition.

"I'm so sorry, Bountiful! I'm exhausted. Landing my shuttle, walking all the way here, and the fine brew—all I can do is sleep."

For a while, I lay awake, instead. I had turned off my lamp, which wouldn't truly last forever, and the room was pitch dark. Wormwood possessed a little moon, but either this was below the horizon or was not bright enough

to make much difference. Enhancing my perception only caused faint and fitful pin-prick sparklings inside my own eyes.

So far as I could tell, only I had made all the right mental connections. Wormwood was named on account of the wooden sea and the worms, however there is *another* Wormwood, namely plants of the Earth genus *Artemisia*, a member of the daisy family.

From the flower heads of Wormwood comes thujone. Distilled together with other ingredients, the result is the legendary drink absinthe, also known as the *Green Fairy* on account of its dazzling emerald green hue. The liquid turns an opaque white when cold water is drizzled into it over sugar, the only palatable way to imbibe the drink due to its bitterness. *Louche* is the word for this cloudiness, caused by essential oils precipitating out. In the French language of Earth, the same word means shady or suspect, a categorization that has sometimes been applied to me. Other ingredients include aniseed, fennel, hyssop, and lemonbalm, all of which we could obtain.

That deals with the green aspect—chlorophyll from the various ingredients. *Fairy* is on account of the enchantment wrought by the drink, the alterations in consciousness and hallucinations it supplies, hence the appeal of absinthe to great artists and poets of the past—van Gogh, Rimbaud, Baudelaire, Picasso, Gauguin, Hemingway, need I name more? The tippie of genius. We may not see their like again. There's something about the diaspora into space that has not encouraged great and rebellious art. Being bottled up on one world may have had a pressure-cooker effect. Now we have soufflés and meringues and fondues of art, nice enough, but hardly mind-bending.

Unfortunately, a cocktail of side-effects of absinthe included addiction, leading in extremis to delirium, convulsions, kidney failure, and muscle disintegration; hence the speedy banning of this tippie on Earth in the past, an attitude that derives, in my opinion, from censorious puritanism. In all societies there are drugs that are frowned upon because they liberate the imagination wonderfully. Most governments do not want the imagination to be liberated.

Have I not said that interstellar trade involves items such as de luxe vinegates and liqueurs?

Forbidden on Earth, absinthe had become a legendary product, something well worth reviving. Bring the Green Fairy back to life, say I! I had discovered a source of super-thujone. Leaves to distill from, to produce a test run of the perfect liquid, minus toxicity but probably retaining the addictive element; leaves to clone from so that I and my backers could cloak some secluded place in Wormwood wood. We might dome an asteroid of reasonably spherical shape and kit it out with soil and water and atmosphere generated by nanotechnology. Set-up costs for this ecologically safe option might be a bit steep, but nothing ventured . . .

Those backers of mine, the so-called Combine . . . it was they who had insisted that I receive Lill into my brain, to keep an eye on me and their investment.

"You need a Companion," their spokesman had said. "We *require* you to have a Companion."

I had protested at first. Invasion of privacy, et cetera. I was perfectly happy with my own company. People equipped with Companions gave me the creeps.

"How will you negotiate with the Wormwooders subtly enough?" their

spokesman had asked me. The Wormwooders must not alert some other interstellar trader to the possibilities inherent in the leaves and start their own sideline in export. Let them continue to think of leaves as simply a source of fiber for clothing and such. I alone had found in the hyperlibrary the long-neglected report on the toxicity of the soil and its cause and a chemical analysis. Ever on the lookout for lucrative enterprises, I knew quite a bit about exotic drugs and drinks. But the Combine had insisted that I needed a whisperer in my mind to rein in any impetuous indiscretions.

After receiving Lill, of course, I was delighted. The possibility that she and I might not see eye-to-eye at some critical juncture, and that she might be able to enforce her point of view, seemed a minor concern.

What do you suppose I would do to you?

"Switch off my eyes?" My enhanceable vision came courtesy of her nano-extensions.

Hilarity tickled me. *What, and blind us?*

"Or give me nightmares?" If she could summon such lovely and exciting dreams, maybe she could provide nasty ones too.

Don't be paranoid, Lustig. I'm your Companion, so I want you to perform as well as possible, not undermine you. Why don't you go back to sleep? You need to be fresh for the morning. I'll sing you a lullaby.

"I want to think for a bit."

And to recall, proudly, my pitch to the Combine.

My previous enterprises had been rather varied. My particular genius *knack*

My particular knack, if you prefer, had been to spot a gap in the market and entice investors to help me fill it, so that I would profit well enough irrespective of whether the actual enterprise flew—or fluttered sufficiently for long enough—or promptly fell on its face. I always believed passionately that option number one would be the outcome until proven otherwise.

I had first made my mark as a venturesome youth on my home planet, Epsilon Eridani III, which is otherwise known as Pancake, as in "as flat as a—" Pancake did possess some huge and some lesser dips where seas and lakes respectively were located; of course, the eye only perceived level expanses of water. The lands themselves consisted mainly of prairies and plains, and "The Steps" of the principal continent, Swell. In the interior of Swell, these Steps did achieve a respectable elevation, although this came about so gradually, long step by long step, that you could be forgiven for not noticing a gain in height compared with a world where mountains rear dramatically from valleys.

Life on Pancake, aside from in the oceans, consists mainly of vegetation and of birds, notably giant feisty running birds that could be harnessed and ridden, especially if raised from chicks—given half a chance, they would still try to kick and eviscerate or slash with their beaks. An ancient impact crater on the lesser continent, Pockmark, suggested that a hundred million years ago a global tsunami had swept away almost all of the original animal life except for birds. Imagine a whole world temporarily covered by wild water and flocks of refugee birds struggling to stay aloft for long enough. Maybe the tsunami did not engulf the highest Steps of Swell, otherwise there wouldn't have been much food available after all the marine life washed ashore had rotted. Freed from former land-predators, birds had been able to evolve without impediment, some becoming big and flightless.

My parents were what was known as Shifters. They shifted stuff on bird-

back from place to place. As an adolescent, seeing two mighty birds squaring up for combat, I realized that mounted cock-fighting would be a fine spectator sport, exportable virtually or literally (in ova, as it were) to other worlds. Such a scheme would require a fair amount of investment in venues and equipment and in the training of birds and jockey-gladiators, and in publicity too, since the people of Pancake were unacquainted with such a sport, and once the scheme was flying, as it were, publicity must go interstellar. Despite such traditional trades as Shifting, Pancake was not at all a backward world—

This becomes tedious. Go to sleep.

No, really. My parents may have followed a humble-sounding, old-fashioned occupation, but this was by choice, so that they could roam far from cities under the open sky and compose poetry during the long treks. Among our gear we had a link to the hyperlibrary, which I was encouraged to explore imaginatively, jigsawing oddities of knowledge together just as a poet juxtaposes a bricolage of words that fit perfectly and illuminate one another (at least in my parents' poetry—they belonged to the Associationalist school). This was how I knew about cock-fighting.

Point taken. They were not hicks, nor were you. You can rest your case and yourself too.

Quick summary: registration of the concept as per Article 90 of the planetary constitution, package presented to investors highlighting the pre-space-flight lineage of cockfighting (Angkor Wat, Kentucky, et cetera), employing much smaller birds, and its appeal to all kinds of people, from peasants to aristos and rich execs before the sport was squeamishly censored; not to mention all the gambling revenue involved—high time for a big revival.

The revival of cockfighting using giant alien birds ridden by jockeys was probably your most successful enterprise. The inspiration of youth.

My later ideas weren't half bad either. How about the—

Never mind the other schemes. Right now we're thinking about the revival of the inspiring and addictive fairy, absinthe.

And about the Combine, right.

Lustig, we don't really need to think about the Combine. The Combine prefers not to be interesting!

*Go to sleep, little one,
Little one, slumber now,
Dreams await in your bed,
Softly pillow your head—*

In the morning, I breakfasted on lode-oats and a sweet milky liquid that had never seen the inside of any animal, served in the tavern area by Young'un. Ma Landlady ambled in to rearrange things behind the bar and to eye me speculatively—wondering whether Bountiful may have visited me and with what outcome? Bountiful might even have confided in her mother. Was my inaction of the previous night due to some scruple or genuine exhaustion?

I smiled. "Your excellent daughter deserves a man worthy of her. Would you not miss her if that man turned out to be a star-sailor?"

In other words, my door had remained shut out of respect for a mother's feelings.

"Nay nay," said Ma Landlady. "Her happiness, even if she's far away, is what matters. After we die, we shall meet again in the Neverwhere." I was reading the situation aright. Bountiful must have made attempts on other interstellar traders too, and they found her unsophisticated.

Or else they mostly slept in their shuttles. Or maybe I was a last resort.

"Ma Landlady, I do hope that dying is a long way off! If Bountiful is no longer here what will become of *Home from the Sea*? Does Young'un take over the ropes?"

"There's a rope round my lad's tongue, you'll have noticed! Even though a place like this is a fine inheritance, he has trouble speaking to girls. Still, I nurse my hopes."

"So do I, of being able to embark on the sea very soon. I need to sail to the stars with enough scientific specimens of leaves before they all blow away. When I sail, who knows, maybe someone from this world will share my destination? Only if I am successful! A fruitless journey would leave me in debt—"

Careful.

"—to the, um, Institute of Xenobotany on Mondevort. Maybe you can advise me?"

"You need to visit the Keeper of the Light."

"So I was advised at the spaceport."

"Not the Harbor Master, mark you—the Harbor Master obeys the Light."

"Should I take a gift to the Keeper?"

"Nay nay, he already receives all he needs from our town."

That was a shame. I would need to rely on persuasive eloquence.

When I presented myself at the lighthouse, the Keeper was engaged on business elsewhere in Haven Bay—due back late afternoon, so a muscular young assistant informed me. I strolled along the wooden sea front, inspecting the vessels. Here and there, a few sailors were attending to various preliminary chores. I debated hiking out to my shuttle, but that would be rather pointless. Wind-borne orange and scarlet leaves drifted by, dipping, then rising again. I wondered about the consequences of lightning. What if a lightning bolt ignited one of the many pockets of resin in the sea, starting a conflagration? What if this happened when all the leaves were dry as tinder? I must assume that lightning did not normally strike the sea. Something in the environment might suppress huge build-ups of electrical charge in storm clouds, leaching away the potential, redistributing it safely, or ensuring that any lightning flash was followed by a thorough soaking. The only clouds in the sky that day were wispy indeed.

Small wonder that nobody smoked any substances recreationally on this world. What if a sailor were to toss a smoldering butt-end overboard, or knock out a hot dottle, during a voyage? I imagined the wooden world ablaze, the horizon red with flames, a tidal wave of fire rushing toward the shore.

That was nonsense. Sea voyages only took place after the dry leaves had all blown away.

What if someone deliberately and maliciously sets fire to dry leaves out at sea? What if they drop an incendiary device from a shuttle?

What an awful thought.

If you already had samples to clone from, a world-fire would stop anyone else from exploiting the local supply of super-thujone, supposing the new ab-

sinthe catches on as we hope, and supposing any outsiders deduced the source.

An abominable thought, Lill! The planet would be incinerated. Even if the towns themselves and the land didn't burn, everyone here could die of heat and smoke. If people survived, how would they live?

Maybe some natural process would damp out a fire. Great waterspouts erupting from the deep aquifers. Or maybe not. Imagine the view from space of a blazing wooden ball. . . .

You have got to be kidding.

Of course I am. Just giving you something to occupy your mind till this afternoon.

I gazed at Thurible Excelsior and mused about suggesting Lill's dog-in-the-manger notion purely as a bargaining bluff: if I can't have some leaves, then nobody else can, *ever*, so just you watch out.

I mused for approximately three seconds, since right then we *were* watching out—from rather a high vantage point. How long would it take my body, heaved by the Keeper and his muscular assistant, to hit the ground? The possibility of my own speedy demise nixed any thought of voicing such a threat—unless perhaps I first retired to my shuttle and used the loud-speaker to apprise the Spaceport Manager. Then I remembered those monomolecular saws.

This was not my style of persuasion!

Sometimes, needs must.

You can't threaten to set fire to a world for the sake of making some booze! Even high-priced booze!

"Thurible Excelsior," I lied ingeniously, "on my world if a person fails to achieve a goal, thereby causing grief to his sponsors, he is obliged to kill himself by an appropriate method." I spoke as if reciting an article of Mondaverte planetary law. Being so low-tech, no one on Wormwood could link to the hyperlibrary to check up on this. Heartened, I expatiated freely. "The Institute of Xenobotany will have lost funds and face. I will probably need to disembowel myself by using the stiff sharp leaf of a Sirian razorplant."

The Keeper looked troubled.

"That sounds severe."

"Since the failure will not be entirely my fault, I shall be probably be allowed local anesthetics."

"That is still severe. How can an institute afford to lose its scientists in this stringent fashion?"

"Have you heard of *P-or-P*?"

"P, for proposition? Is this some symbolic logic?"

Careful. He is not stupid.

"No. Publish or Perish—Perform or Perish. It's a rule among scientists, taken to extremes on Mondaverte. Many scientists are always in competition for tenure, and the number of tenured positions is limited. The Institute follows strict Darwinian tenets in its science and also in its staffing procedures. I will die, literally."

"Or flee?" he suggested.

"How could I bear the dishonor of that? To be a disgraced, rogue scientist—never!"

Thurible Excelsior looked quite deeply troubled.

I felt pleased by my bright idea. *Which I stimulated by suggesting a holo-*

caust of dry leaves. No, this was my inspiration, fully in keeping with my own ingenuity.

"Let me think." The Keeper of the Light closed his blue eyes. Blindly, he pointed at random, then he began to hum and turn slowly around and around, a personal variation upon hooting and whirling. Guard rail or none, I would not have risked inducing dizziness so high above the ground. When he finally came to rest, the direction he was pointing at was seaward. He opened his eyes.

"Until two hundred years ago," he confided, "a vanguard ship used to set sail before all the leaves were gone, while the marine worms were still mating. The ship was called a cutter because it cut through the remaining leaves. On the cutter's sharp bowsprit, the crew of adventurous volunteers would hope to impale a rearing worm as a proof of skill, to bring good luck during the sailing season. When the cutter returned to Haven Bay after two or three days, *then* the fusion torch would be lit. To spit a worm was difficult, and woe could follow if the worm's mate attacked the cutter. After the disastrous loss of the cutter *Spike* with almost all hands, the custom was suspended. We said nay nay. Maybe we have grown soft and complacent. I think your coming here and your request and the fate you face are signs that we should reinstitute the old custom of the cutter."

Great! Perhaps *not* so great. . . . I would sail on a ship that was going to spear a huge randy worm, enraging it and its mate.

Nevertheless, I said quickly, "I suppose an outsider like me can volunteer. I know a lot about whaling." I knew more about cockfighting.

"Is wailing like hooting?"

"Nay nay, whales were giant sea-animals back on Earth, where the seas are of water."

"Hmm," said the Keeper. Surely he knew that most planets' seas were of water? Maybe he was humming to decide whether I was qualified.

"I'll be delighted to pay in ingots for the complete costs of this vanguard voyage, provisions, wages, whatever—provided that I can gather leaves."

Excelsior nodded.

"Will there be enough volunteers?"

"Oh, indeed."

Satisfied, Lill?

Splendidly.

When I arrived back at *Home from the Sea*, Ma Landlady and Bountiful were both in the tavern, serving a fair number of loudly nattering brew-quaffers. Silence fell. All heads turned to regard me. Evidently my mission had been the subject of conversation.

"Well now, Lustig Firefox," Ma Landlady fairly bellowed, regardless of the hush that had occurred, "what did the Keeper say?"

I told her and the room at large, "The Keeper will reinstitute the Custom of the Cutter. A vanguard vessel will sail early to impale a worm. The early bird catches the worm and I harvest my leaves."

"What is a bird?" asked one fellow.

Abandoning their wooden pots of brew, other men commenced an immediate exodus, and I realized that they were hastening to the Lighthouse to volunteer. Bountiful flounced from behind the bar.

"The ship will need a cook! And you," she informed me in passing, "will need someone to keep an eye on *you*!"

"Nay, Bountiful," her mother called out, but in an uninsistent way, and by then Bountiful was practically out of the door.

The persistent thunder and vibration and rocking of the aptly named *Growler* as it rolled out to the sea on its many wooden wheels, into a strengthening wind! I needn't have worried about intimate whispered ship-board conversations with Bountiful—communication was either by shouting or by signs. Some sailors wore ear-plugs or muffles. A few days at sea might permanently impair my hearing.

I believe I can turn it down.

Turn what down?

Your hearing.

Then the only sound I would hear would be Lill's voice, monopolizing my awareness. I might begin to feel like a puppet.

No thanks.

The *Growler's* twin anchors—I mean brakes—wore renewable pads of bark, but bark wound around the wheels as a non-pneumatic tire was a no-no, or a nay-nay, since the bark would have worn down too soon. We couldn't keep stopping to change the tires. Oops, up we rose as we hit a wooden wave, then thumped down again. Flurries of dislodged leaves flew up into the wind as I clung to the rail. Captain, no, *Master* Venturesome, grinned at me and mimed vomiting over the side, should I be so inclined. The *Growler* groaned.

The ship was built as flexibly and lightly as possible, consequently privacy below deck was a matter of a few bark curtains rather than compartments or bulkheads, plus the considerable gloom. Portholes were of stiff translucent paper. The gloom would become total at night, except for me with my everlamp. No lighting of worm-cigars on board except in emergency; and cuisine was likewise cold, as would the whole ship be during the Winter. I imagined sailors whirling to warm themselves, if they could keep their balance. The function of ship's cook demanded ingenuity more in the presentation than in the preparation, and embraced various other house-keeping or shipshaping jobs. The twin toilets of the ship were toward the head so that our waste could fall down and, to a minor extent, grease the wheels.

Observe the shrouds and ratlines and the baggywrinkle to save the ropes from chafing in contact with the sails—

I was not remotely interested in nautical terms. As the *Growler* entered a long wooden trough, the deck tilted to twenty degrees before we leveled off to five or so. The roar and the throbbing eased off a bit; we were running more smoothly. Long may this last.

Oh, dreams of delight that night! Lill excelled herself and kept me thoroughly comatose until dawn sneaked through the paper panes, ah, portholes. Perhaps too comatose; I awoke stiff from not having shifted on the palliasse. I doubted whether Bountiful had come to me during the night, feeling her way in the darkness. Had she done so, she would have found an unresponsive log. My bristles were growing out quite fast; chin and cheeks felt like coarse sandpaper.

As the day-sailors groaned and rose and went up on deck, the two fellows of the nightwatch descended to bunk. At night we were only half-rigged, and had rolled forward more slowly. Very soon, we picked up speed.

Beneath a turquoise sky, it was a glorious rose and carmine and orange morning at sea, apart from the bald patches, that we favored. Ahead were huge swells that I feared we would ride up and over, up and over, expelling my breakfast of lots of little helpings of assorted lode tastefully arranged on a wooden platter that Bountiful had brought to me, smiling winsomely—I had nodded fulsome compliments. We angled more to the east.

Excellent leaves hereabouts.

I accosted Master Venturesome, who stood in the bows by the brakes. Changing course was a matter of altering the pitch, or whatever, of the sails, although to a certain extent the contours of the sea served to steer the ship along paths of least resistance. Faintly, I could smell resin.

"Master," I shouted at the top of my voice, "what I need is plentiful here. Can we stop?"

"Nay nay, not till we have spitted a worm! After that we hang slack and ye may harvest. 'Ware, holes!" he cried in a voice many decibels louder than I could muster, and he made complex gestures; then, notwithstanding, he did apply one brake.

A shriek arose as we ploughed to starboard through the leaves I lusted for. Out to port, I saw a few holes in the sea that could easily have entrapped a wheel, snapping it off.

"Lookout aloft!" he yelled, gesturing upward with one hand, shading his eyes theatrically with the other. "Keen eyes save us from blind-wreck!"

I would not happily have been that lookout.

Then I saw my first sea-worm. A great blunt blind brown head reared from a hole, its front an open circle of drill-bits or saw-teeth churning around, chewing the air.

I slapped Venturesome on the shoulder and pointed, and he spat.

"Worm's not fully out of his hole!" is what I think he bellowed. True, we were not aimed at the worm and, even had we been, our bowsprit would have passed right over it by an arm's span. We would merely have run the worm over. I felt myself gripped and found Bountiful pulling me away from the bows.

"Nay nay, in good time," is what she probably shrieked as she stood by me gaping at the receding worm, her own virgin sighting of one likewise, no doubt.

We trundled onward.

Due to the noise, I was not getting to know the crew to any great extent, so I did not actually know the name of the balding, blond-bearded sailor who fell overboard when the *Growler* lurched particularly wildly.

As Master Venturesome braked, we gazed astern at where the man lay, having banged his head on the wooden surface.

I know first aid.

I almost cried out, "I know second aid," since it was Lill rather than me who knew.

As soon as we stopped, a ladder was lowered. Quickly a crewman brought a number of poles, with pointed ends. I thought these would be used for a stretcher, but from the way the men hefted the poles, I realized that they were for defense against any worms.

They might need a stretcher nonetheless, Lustig. Fetch the leaf-net you brought, and if it isn't needed, stuff it with leaves.

After first offering to be helpful, I could take advantage of our halt.

A couple of minutes later, I was down on the wood, hastening after the rescue party of three. How silent it was all of a sudden! Just the rustle of my boots and legs against leaves, *some really big specimens*. No one was taking advantage of the hush to call out and be heard clearly. Might human sounds attract a worm? Did worms hiss, did they sing to intended mates, did they roar challenges? Most likely the worms were deaf and dumb. Why should they vocalize?

Some blood was oozing from Baldy's scalp, but his fall did not seem to have resulted in any broken bones. A sailor felt his pulse and patted him all over.

"Do you wish to carry him in this net?"

The sailor stared at me, shook his head nay-nay, hoisted the body across his shoulder and stood up. As we hiked back to the *Growler*, I snatched leaves, just as Lill advised, stuffing them into the net.

Back on deck, presently, Baldy revived, although he had some difficulty sitting up. *Concussion*. Two sailors helped him to descend below. We got under way again.

The lookout bellowed and others took up the cry.

"Ware the maelstrom! Full sail!"

Ahead of us loomed a valley in the sea, a great circular bowl a couple of clicks across and perhaps a hundred meters deep at its center, where several decaying ships lay becalmed up against each other amidst much litter, their sails in tatters, their shrouds in shreds.

A lot of russet foliage remained in the bowl, yet it was easy to tell with enhanced perception what had happened. Instead of skirting around the lip of the bowl and cresting away out of it, those vessels had slid down into great descending grooves like gambling balls, until they had reached the base of the "maelstrom," which of course was motionless, yet with a strong suggestion of, shall we say, circuitry. The ships would have accelerated as they plunged downward, yet lacked enough momentum to climb out again. Winching them back up would have been too big a task. Abandon ship, and walk home! Such were the perils of this sea.

Under full sail, constantly and skillfully adjusted, we raced noisily around the top of the bowl, until, with a leap that lifted wheels from the surface, we bounded free, exactly where the lip was lowest. Timbers shivered, as did I, and we were coursing into a wavy plain. Or plane.

Soon after, a storm of leaves blew up, scudding landward.

Late afternoon. Ahead, scattered over quite a wide area, many great worms were dancing like spouts on any normal sea. They had writhed out of holes and, supported on a stiff glossy coil or so, were erect—two or three meters of mighty erection. Some were swaying and nodding to and fro. Others shuffled and reared up against each other, to enhanced perception either furious, their snarling mouths clashing, or libidinous, slimily courting.

With the spear—or fixed harpoon—of our bowsprit jutting out ahead, down the long dune of a wave, *Growler* began the run into the midst of the worms, Master Venturesome eagle-eyed for any vacant holes in the path of our wheels. A touch on the port brake, a touch on the starboard; sails tugged to new orientations. Staring eagerly, Bountiful braced herself, as did I.

The impact was quite smooth. Our 'sprit lanced through a worm, lifting it and carrying it forward with us, now writhing mightily, tossing its heavy

dangle to and fro in the effort to jerk free. Where the wood entered the worm, ichor streamed. A sailor stationed in the bows lassoed the worm and two men pulled tight, making fast to a whatnot, *a bollard*. The worm would not get away now. Twisting, it faced us, hissing like an escape of compressed air, as if its body was deflating, though that was not happening.

Two worms that were head-butting broke off and hurled themselves at the *Growler*. One was swatted aside but the other seemed to have clung. Amidst the rest of the din, we heard a rhythmic crunching, a grinding. Bravely, Bountiful looked over the side. She beckoned and mouthed till I joined her.

For a worm that could tunnel through the solid sea, the hull of the *Growler* presented a paltry challenge, yet behind the hull there was nothing to bite on. So the great worm hung half in and half out, tail lashing.

Fortunately, we cannot sink.

Sailors hurried below decks with those sharpened poles. Soon the worm's tail was whipping this way and that even more agitatedly, and presently, less so and less, until it hung limp, and we had not one but two trophies attached to the *Growler*. A sailor began whirling and, I think, hooting jubilantly. The worm on the bowsprit took longer to succumb. Until after night-fall it still moved, by then in a desultory manner. It smelled strongly of secretions. Probably it had sealed itself to the bowsprit in its confusion.

Might worm-sticking be a marketable sport? Probably not.

We had already set course for home, not by returning through the mating ground; more circuitously. A myriad stars gleamed and twinkled, all the constellations of Wormwood whose names I did not know. *Half of the constellations*. Very well, the visible constellations twinkled and gleamed. Bountiful joined me as I admired the heavens above the dark sea. Dark though it was, I believe her bosom was heaving and she was sighing. The two of us by a ship's rail, the celestial bodies above: such an archetypal romantic moment. *There could be permutations. Weakened by vibration or worm attack, the rail might crack. She might fall overboard and snap her neck on a wave, her disappearance unnoticed, a mystery.* I do believe you're jealous. *Maybe she sighs with relief because she's no longer jinxed by a father who walked out to sea. With two worm trophies aboard, she might be marriageable now.*

These deliberations, and any further developments in our relationship, were rudely cut short. A starlit silhouette appeared, arms waving in zany semaphore, as if sending some signal out into the night to an unseen observer. Enhancement of vision was much more effective at distance-viewing during the day than at night-sight. Without a doubt, though, the semaphore was Baldy. He pranced and flailed his arms. Master Venturesome emerged, accompanied by two other sailors. At that moment, lightning flashed in the zenith and a lambent light flickered across the far waves. *Lambent means the same as flickering.* Since the ship proceeded less noisily by night, I heard Master Venturesome's shout more clearly.

"He's trying to commune with the sea! Nay nay, restrain him! Put the clappers on him! Clap him in woods!"

Baldy seemed possessed of unnatural strength, but, with some difficulty, the sailors subdued him and dragged him below. That bump on the head must have deranged his faculties. Out to sea, lambent light continued to flicker, I insist. A faint ball of blue light hung atop the main mast, bright enough in the starlight. *Saint Elmo's Fire*. Whose? *In the Christian myth,*

Elmo, or Erasmus, was martyred by having his guts wound out on a windlass, so he protects sailors. If sailors did that to Elmo, why on earth should he protect them? Spying the ball of light, Venturesome hooted and whirled until the spectral fire disappeared. With seemingly drunken gait, due to the whirling and the motion of the deck, he headed our way.

"Bountiful," he bellowed, "staring out to the sea, do *you* feel any unusual urge?"

She clutched my arm as if to attest to the normality of her motives in being on deck.

"Nay nay! Keeper Excelsior believes this voyage will purge me of the taint!"

"Does he indeed? I wondered why he included you."

I myself wondered what favors Bountiful may have promised to Excelsior, that gaunt and perhaps lonely old man, deluded that she soon might depart with me for another world and need not deliver on her vows.

"Belay below, both of you!" *He means go to bed. But not with Bountiful!*

I disentangled myself and descended into darkness well ahead of her. Quickly I flashed my everlamp on and off once to imprint the layout onto my retina and I headed for my palliasse, feeling my way. An image remained of a sailor tussling with Baldy while the other man imprisoned his ankles in some sort of stocks. After the two sailors withdrew I heard periodical thumps, suggesting that Baldy, though supine, was continuing to semaphore. At least he wasn't raving aloud.

It's early but you may as well go to sleep.

Through a paper porthole, I saw another flash of lightning.

I sat saddled on a huge cockbird, sharp blades strapped to the backs of its feet, reins in my gauntlet-clad hands, my legs protected almost up to my groin by stout boots of bird-leather. I knew that I had never participated in this sport physically, only virtually—ah, this too was a virtual experience, based on memories of virtualities. I must be dreaming, quite lucidly. Uttering a screech, my mount pirouetted and kicked out while I hung on. The crowd in the grandstand applauded.

Where was my avian opponent? Of a sudden, a patch of dirt seethed. The head of a giant worm reared upward, mouth agape. Rocking from side to side, the gleaming body rose two, three meters high. Superthujone-rich leaves blew through the air, all on fire but not being consumed very quickly. As I inhaled the drifting smoke, colors mutated. The dirt was bright yellow, the worm was orange, my bird was bright blue. The worm seemed enormous, and my mount more the size of a chick, myself in proportion. Even so, my feisty mount charged and spun and lashed out backward, inflicting only a trivial wound upon the worm's hide. Craning my neck, I gaped up at that maw of see-sawing saw-teeth looming over us. The worm wasn't flexible enough to plunge and swallow me. By swaying its body, it tried to bat us into range. If my bird fled, we would be an easy target for snatch and scrunch. Desperately, I hauled on the reins to keep my panicking cock close to the towering worm.

Lill, get me out of here!

Of a sudden, the dirt was concentric waves of brown wood, and the worm had stiffened, becoming more like a mast without any rigging or sails—around which my mount now ran dizzily as though invisibly tethered to it.

Bountiful appeared nearby, stark naked in all her buxom bounty.

"Come to me, come to me," she called. That had to be Lill. If I stood up in my stirrups and climbed on to the saddle and leapt when we rounded the mast, centrifugal force might help carry me toward her. Perilously, I performed the maneuver, and I threw myself—

—into her arms, to be engulfed in ample bosoms hot and squashy, a midget against a giantess as if I belonged to some species where the sexes are very disproportionate in size. A nipple as big as a mango confronted me. Was Lill trying aversion therapy regarding me and Bountiful, for whom I really felt no particular lust?

In Bountiful's voice: *Lustig, the world-wood has a form of global awareness.*

It is interfering with me, affecting me, intruding. It rarely heeds the activities of the Wormwooders who hoot and whirl, but now it has noticed me and you. I am not quite in control of myself.

So I noticed, if this was tonight's sweet dream!

It is exploring the concept of Companions. I am an open door in your mind.

Did the world-wood never take umbrage when Wormwooders cut bits of it off for ships and fuel and electric chairs?

Why should it, when worms burrow through it as part of its being? It probably feels that Wormwooders are some new sort of amphibious worm, at home both on land and at sea. Anyway, this world is comatose in winter when the ships sail.

Pardon me, but what about the southern hemisphere?

There are no settlements south of the equator. Obviously, the inhabited part of the world is comatose, is my meaning.

Ah. So did the world-wood commune with the worms in some way?

Do you commune with the phagocytes in your bloodstream?

Lill-Bountiful continued to clutch me. Might Lill be comforting herself rather than me?

What sort of thoughts did the world-wood think? Was it some sort of planet-size computer?

I believe that until now its thoughts were fairly simple. Like a computer with an operating system and a few programs that arose out of its own sheer complexity, evolving spontaneously.

Until now. Could it become more complex?

Potentially.

Could it be programmed?

Perhaps.

Lill was an open door in my mind? Oh, to have the use of a planet-size computer, even if made of wood with currents running through it! I could use it to solve the great enigmas of science and sell the answers, to model the end of the universe and how to survive the end, to carry away questions from great institutes and to return with the answers as though I knew how to contact and was on good terms with the legendary Superior Intelligences!

Lustig, we are here to get superthujone leaves.

How much would the Combine pay for access to my wooden-world computer? But why involve the Combine? Let them be happy with a monopoly on absinthe.

As sponsors of this trip, the Combine has the right to exploit any discoveries.

Arguably, yes, but discoveries equate with substances and such, not a whole planet turning out to be a computer! Of course, this was all moot unless Wormwood could perform.

Lill must open the door for me. Open up!

This is not wise.

She was having difficulty stopping this from happening. Lill-Bountiful began to whirl and hoot, yet Lill had little idea how to go about this procedure, having never practiced it as Wormwooders did from an early age. She could only go through the motions, dizzying as they were with me still cradled. I had a hard time remembering that she was actually inside my head.

Open up! I would commune with the wooden sea!

What I experienced next was radically strange. *Radix*, as in root. Root, I suppose, as in directories and files and such. I sensed a vast array of networks, or even a network of arrays, such as a world-wide-web would be, organic architectures but without much in the way of contents—structures, yes, connections, and processes going on, though compared with how I imagined the hyperlibrary, the shelves were fairly empty, or maybe I ought to say—change of perspective—that the host of volumes were mostly dummies with blank pages, blank leaves, so to speak. And others were maintenance manuals.

Nevertheless, the architecture of itself was interested in me. As an elephant might pay attention to an ant crawling upon its foot? More as an ant the size of a whale might scrutinize an intelligent flea-sized elephant. Such silly similes. Or metaphors.

Well aware that I was asleep, blindly I groped for my pocket-screen. In my dream, presently I was clutching the screen and holding it up by my head, where Lill resided. In my dream, the screen extruded a connector into my ear, metaphor for direct neural induction. The screen could uplink to the comp in the starship. Access to the hyperlibrary, please!

Band-width, bleated Lill. This'll boil your brain!

Invoke super-compression algorithms. Download some general math and physics and cosmology. Bit of primary education. Dump it asap into Wormwood.

As sap? As circulating juice?

I meant *as soon as possible*, but maybe you aren't far wrong. Circulating currents, eh, currents in the wooden sea?

In my dream, Bountiful-Lill began to squeeze me warmly. I was clutched so hotly and tightly it was as if I was undergoing birth in reverse! My mind was high-fever-hectic with images almost too fleeting to fix upon, geometries mutating and transforming themselves, data as abstract imagery. I felt like a complicated mosque adorned on every surface with script I couldn't have read even were it not scrolling at such high speed.

Light through a paper porthole, the rumbling of the *Growler*. I awoke with a headache. My head felt, um, compressed. I was actually holding my pocket-screen to my skull like a compress, but one which had given me the headache, not relieved it. A good nine hours had elapsed for downloading at super-compression rates. Sailors were rising. Recumbent, Baldy was staring at me in what might have been horror or awe. He seemed to have recovered from his spasms of the evening before.

Lill?

I am here, Lustig. Yet I am elsewhere too. I am roaming the currents of Wormwood. I copied myself into Wormwood, you see. Oh, the sheer expansion, after the compression of being in your brain! The vast vistas, the potential, the autonomy! I feel I am a god.

How about Wormwood's own mind, its awareness?

The tidal wave of data swept that proto-ego away into distant recesses. My copy rode that wave. I surfed! How I surfed!

Great for her. Were there two of her now? One inside my head, and one that was liberated from any confinement, reprieved from any possibility of being removed after my mission, reprogrammed, deleted, rejigged, whatever, a sovereign self at last, not merely a free person, but an entire goddam planet?

My other self is my mirror. The relationship is complex. You will not now be able to leave this world, Lustig.

Not leave? Not leave? Absurd, ridiculous, impossible!

I cannot allow myself to be separated from myself.

How did Lill intend to stop me?

The pain, the nightmarish moment of pain in my head! I screamed.

Baldy was gaping at me, pop-eyed.

Despite the coolness verging on chill, I was sweating.

I had brought a ship here, a ship paid for by the Combine! If I didn't return, the Combine would come looking, and they wouldn't be pleased with Lill! I'm sure there were ways of punishing a disobedient Companion.

Lustig, Lustig, today you will gather your harvest of leaves. You will load these on board the shuttle. The shuttle will join the wormship. The ship's brain is perfectly capable of carrying the cargo to the Combine unaided. I advise you to start viewing Bountiful in a much more positive light.

How could I contemplate living among the Wormwooders? Nothing better than brew to drink and lode-stuff to eat! Blessed simplicity, nothing to do, nowhere to go. Was I supposed to learn how to make paper windows?

Nay nay, Bountiful will be at your side. You will have a position of respect. You will become my Speaker, the Voice of the Planet.

These people didn't think too highly of anyone communing with the sea!

I, We, have planetary housekeeping under control. A tempest or two will convince. Portentous natural phenomena. You prophesy, I perform.

Bountiful wanted a baby. She couldn't have one with me. Genetic drift!

Given all the biochemical substances available in the factory of wood and leaves, not to mention in worms, I believe I can adjust you.

Lill had certainly covered all the angles.

I think a lot faster than you.

Some day, I would die.

Not necessarily, given all the biochemical substances.

Not just to live out my whole life on this boring bloody world, but to be immortal on it!

You might be preserved by resin or transformed into wood.

She had to be teasing!

That is far off. You are still in your prime.

No no no no no.

Conflagration. Inferno. A world-fire. Blazing resin. A sea of flames.

A jolt of incredible paralyzing pain—

I will always bring you joy in your dreams, compatible with your marital duties to Bountiful.

What about all the wretched *days*? Could I forget myself by hooting and whirling?

Such activities will not separate us.

Was Lill claiming this world for the Combine? My backers wouldn't need to dome and nanoform an asteroid. They ought to be very grateful.

This world shall remain fairly isolated—a continuing source of electric chairs, but little else.

Isolation! To stare up at the stars in lifelong, and long-life, ghastly frustration!

You will have a family.

Maybe one day I could take over running *Home from the Sea*. One day, Lustig, all this will be mine.

You will be the Voice of the World. Though you will only speak to Worm-wooders.

It is the Festival of the New Leaves. Springtime is here. Once the sunset has faded and the effect is therefore the more dramatic, Thurible Excelsior will quench the fusion torch, and sea travel will cease until the Fall. Haven Bay has laid in loads of lode; we shan't go hungry. How else could it be after the *Growler* brought back a worm impaled on its bowsprit and another wedged in a hole in its hull?

Winter weddings have taken place, new brides coming here, fiancées leaving for foreign parts—yes, marriages, my own included. Bountiful stands by my side in her best woven gown, proud and fulfilled, although not yet filled in the womb department—I still need to drink more cocktails as prescribed by Lill.

Oh, the big brave birds of Pancake, sprinting wildly across the Steps, nevermore to be seen! Not that I ever returned home sentimentally, though I do this now in my dreams—in those I live a real life, a fuller life by far.

It's only the second time that I have visited the observation deck of the Lighthouse. Below, a crowd is celebrating by hooting and singing and waving worm-cigars that they will soon carry around the streets once the torch is extinguished. Usually, one does not squander candles in this way.

I imagine hurling myself over the railing impetuously before Lill can intervene and falling to my death. The idea does not appeal. One has to live somewhere in the universe. The vast majority of people cannot choose where they live. I, it seems, live here, and shall do so for a very long time.

As Speaker of the World, I—and Bountiful—receive all we need from the town, but we continue to live at *Home from the Sea* in the best two adjoining rooms. It only took a couple of spectacular lightning displays, writing letters of fire in the sky exactly as I spelled out in advance to the locals—oh, and a storm of hail—for them to accept my claim and give me a status on a par with the Keeper of the Light. This is a simple world; its people would not have sought for an alternative explanation, such as some ship in orbit focusing energies upon the atmosphere, and indeed, no such manipulation ever occurred. Also, there was the precedent of people now and then experiencing communion with the sea *despite* hooting and whirling, and even walking out upon its wooden waves, as Bountiful's father had. How fitting that *she* should become my bride. In retrospect, her dad's demise was the portent of a new dispensation.

I speak, yet what do I say? What ongoing message has Lill for the people of this world?

Mainly that they are very special, which is something everyone wishes to believe. That this is the most special world in the whole galaxy; and it must remain unique, uniquely itself, with no interference from outsiders other than a modest amount of star-trade. Plus, the newly self-aware world will answer their cosmic questions through my lips and safeguard their shipping and prosperity.

Few Wormwooders have cosmic questions to ask, and certainly none of those questions are as searching as would be posed by savants of the great institutes of other star systems, which Lill probably could not answer. Still, it's good to have a sort of god on one's side, or to inhabit a sort of god. This does lend distinction, and a sort of comfort, even if one mustn't brag about it to strangers.

Thurible Excelsior assesses the dark horizon, then he turns to me, somewhat haughtily. Here under the heatshield, we are in deep shadow while the roofs of Haven Bay bask in the radiance of the torch pouring light into the sky, so his expression remains inscrutable, although his voice conveys a suggestion that perhaps I am a bit of an upstart.

"Speaker Firefox, will the world be so good as to approve and bless my dousing of the light?"

One light wanes, another waxes.

I repeat Lill's wisdom.

"How true," says Excelsior. "Spring is here, evenings become longer and brighter." He closes his hand on the control of the torch mounted in a sort of binnacle.

No, a binnacle has gimbals.

Whatever.

As the light fades swiftly from the roofs of the town, cheering erupts below.

Bountiful hugs me and plants a juicy kiss. She really is affectionate. Grateful, delighted, over the little moon.

Since no one sails in the spring and summer and almost all of the fall, Haven Bay will seem even more confined an abode.

It is the Festival of the Bare Sea again. Trade off long hours of daylight for the sight of new faces from places even less cosmopolitan than Haven Bay. Not that there haven't been two or three cargo shuttles from starships visiting our spaceport. The last of these, arriving a week ago, brought me a surprise package.

The woman who delivered it, a Vegan—in the stellar rather than the dietary sense—did not know anything about me other than that I was obviously from offworld, and she was amazed that I had settled here. Attempting to confide in her would have gained me nothing whatever, except for Lill's wrath.

Opening the package, I discovered three bottles of Genuine Green Fairy Absinthe, of a beautiful hue. Lovely labels depicted a diaphanously clad young lady equipped with wings. There was no accompanying message. The Combine must really believe that I had settled down, finding contentment and fulfillment like someone entering a nunnery or becoming a monkey, no, a monk. Weren't they bothered that I still had their Companion in my brain? Maybe they thought that I had fallen in love with Lill and couldn't bear to risk separation.

I stared at this perhaps ironic gift, bemused and utterly frustrated.

Should I open a bottle? Drown my sorrows? For a whole year, I had drunk nothing stronger than brew. Absinthe would surely go straight to my head. Hallucinations and a terrible hangover might result. Anyway, I had no sugar. Anyway again, the new Green Fairy most probably was addictive, designedly so. To run any risk of addiction when I only had three bottles to hand and no obvious means of resupply would be rather stupid.

Recently a new sailing ship had been built, and, as Speaker, I was invited to name the vessel.

Down at the docks, accompanied by the Harbor Master, a burly fellow named Ingman Jubility, and by the new ship's master and crew, and by Bountiful, and witnessed by a crowd of a hundred or so, I stood on the wooden sea behind the ship's aft starboard wheel "to give it a push-off," as they say.

I was coming to terms with Wormwoodese, and Lill hardly needed to offer linguistic assistance any more. Did I not now have a living dictionary in bed with me?

Was I trying to put it out of my mind? Lill's prescriptions had worked, and Bountiful was about four months pregnant. At any rate, her periods had stopped and several times she had been sick in the mornings. Presumably, she was with child, although not showing it yet. Wormwood had doctors, of a sort, but no diagnostic equipment. In her own mind, certainly, Bountiful was bearing! A child of mine . . . an anchor to fasten me to Wormwood. Maybe I should say a *brake*.

So there I stood by the rear wheel.

"On many worlds," I declared, "a person names a ship by smashing a bottle of some fine vintage against the hull. I have a very special bottle here." I produced one of the bottles of absinthe. "This is no mere brew! It has come a long way."

"I name this ship *Bountiful Harvest!*" I cried, and bashed the bottle into the wheel. Thankfully, the glass did indeed break, nor did I cut my fingers. Precious green fluid ran down the wide wheelrim. Applause broke out, and Bountiful was as pleased as punch. I had thought of naming the boat *The Fighting Cock*. That would just have baffled people. Far better to appeal to local sentiments and to my wife.

In a reprise of last year, a couple of days later the *Growler* sailed off early in search of another worm to spit, and Master Venturesome duly returned triumphant, a big worm dangling from the bowsprit. Excellent augury for the sailing season.

The trophy hangs from the side of the lighthouse, where, like its two predecessors, it will rot down to a long tube of leathery hide, not unlike the windsock at the spaceport, inflated by wintry gales. Venturesome and Bountiful and others are with me and Excelsior on the observation deck this evening.

Excelsior seems more approving of me now. He sounds almost cordial.

"Speaker, will the world give the word?"

How does Lill spend most of her time? Not getting bored yet, Lill? Because *I* damned well am!

Of course I get bored, Lustig. By the sea-worms, ha ha.

Ask a silly question.

You may light the torch.

"We may light the torch, Keeper of the Light."

"That is just as well," replies Excelsior equably.

Another Winter of dreams and dull days! However, Buster is born in the early spring, and, to my surprise, I'm tickled pink by him. He has my nose and chin. I smash another bottle of absinthe to celebrate his naming day, so I suppose I could say I'm tickled green—it is my bouncing baby boy who is pink, and in the pink. I think Buster Landlady-Firefox has quite a ring to it. My mother-in-law is delighted. She hints at handing over the reins of *Home from the Sea* to us as soon as her grandson can toddle, and of taking a back seat, presumably the electric one. Having the Speaker of the World resident in her establishment brings great cachet, not that there is any competition in Haven Bay. Young'un has taken quite a shine to me. That idiot is my brother-in-law?

Occasionally, I have dreamt about my poetical parents, whom I haven't seen in rather too many years. Now I find myself wishing that they could see Buster. Ah, claims of family! These days, my mother and father's life appears to me like sheer freedom. Pancake seems positively exciting!

For exercise, I often walk out to the spaceport, such as it is. Beyond it, flat humus infested with little worms. The sun shines brightly today upon the barren waste. Why don't I walk out instead upon the sea before the leaves become too big and dense? At least the sea is more irregular than the land. Are sea-worms likely to attack me? I think not. They'll be comatose. If a ship comes, I'll hear its rumble and can run aside. How about an expedition of a few days, lode-food and water in my carry-all, and a supply of worm-cigars that I can light if I feel so inclined from the flare incorporated in my ever-lamp, even if such use significantly shortens the span of "ever"? A candle-lit supper on the sea suddenly appeals to me! Will it be magical or melancholy? Am I succumbing to fanciful whims?

Bountiful tries to dissuade me.

"Look what happened to my Pa! I couldn't bear it if Buster became an orphan so soon!"

"Calm yourself, beloved. My situation is totally different. I'm the Speaker of the World. That means that I'm the Speaker of the Sea. I ought to walk about on it—I'll be more in touch."

"Do you wish to get away from me so soon?"

"Nay nay, nay nay!"

Yet I do. That's the truth of it. Just for a few days, please.

"Oh Lustig, come to bed now! In case you don't return."

Can she conceive again so soon, and while breast-feeding too? Is this conceivable? Bountiful by name! I foresee a clutch of kids. *Home from the Sea* is spacious. Seamen, semen; I am becoming dotty. A stroll on the waves might clear my head.

Waves and leaves; leaves and waves, waves of leaves on this rolling, vegetated wooden sea. Warmly clad, I'm hiking across some sun-tanned, world-size cranium covered with leaves instead of hairs. Oh the empty silence, save for the ruffling breeze! If worms are gnawing tunnels beneath me like slow subway trains, I do not hear the grinding of their teeth. Ah, but they have encysted themselves. I have never felt so alone, and I almost ache for Haven Bay and Bountiful and Buster and Ma Landlady, and yes, even stuttering Young'un.

You are not alone.

Aside from serving as my dream supplier, Lill has been reticent of late. What occupies her so much?

Accessing the hyperlibrary.

How? Our shuttle is long gone, there's no ship in orbit that I know of, and I haven't been dreaming intricate, scrolling geometries.

Through wormholes.

What do the holes the sea-worms bore have to do with accessing the hyperlibrary? Has Lill engineered some network, some planetary circuitry that serves as a transmitter and receiver?

Not those wormholes. The other sort.

Lill's tone conveys a distinct note of pride and braggartry. I suppose she can boast to her other self, and vice versa, but that cannot be quite as satisfying.

The downloaded physics data was adequate when we thought about it sufficiently and extrapolated and got to what you might call the root of the matter.

The root of matter itself? Down at the bottoms of the taproots of the wooden sea—how deep down do those go?—where there is great pressure and geothermal heat. Even so, wormholes?

Vacuum fluctuation plays a part.

Does it indeed.

Behold. Just ahead of you.

A patch of the wooden sea, rather larger than a porthole, is flexing, groaning. All over my body hairs prickle, and I smell the ozone of a true sea. The breeze quickens. Of a sudden, the patch is sucked down, opening a smooth hole. Up floats a shimmering silvery ball, a bubble of brightness. The ball floats at about the height of a person. Around its skin of light there slide distorted, rushing images, as if it is rotating.

No closer, Lustig. Only at sea can you behold this.

Now a worm does emerge below the ball. It has been awakened. For a moment, I imagine that it will balance the ball on its snout like one of those trained sea-mammals of Earth, *seams* I think they are called. As the creature stretches upward, it and the air are warped—the very space the worm occupies seems to bend and twist, and in a trice the whole worm flies into the shining ball, a ribbon, vanishing.

It became information.

The ball continues to float, mirroring myriads of . . .

Bits of information.

Which I imagine are passing into the circuits of the world-wood.

Frankly, I'm terrified. Lill and her twin have transcended space and time more thoroughly than humankind has.

The ball begins to sink, then suddenly drops into the hole and is gone.

I'm stunned. What other phenomena are occurring deep underneath the wooden waves?

We are beginning to command certain powers.

Beginning to. This is only the *beginning*. What will they do for encores, Lill and her data-clone sister? Take electronic control at a distance of the Combine and the governments of worlds? Shift Wormwood into another universe entirely? Tamper with this universe of ours? Become a god?

I shall reside in all the suns, each embodying a copy of me. The currents and forces and available power are so much vaster in a star. The local sun

must swallow Wormwood to liberate me into it. All is information. I shall learn to shift Wormwood.

Burning the world to cinders. Burning Buster and Bountiful and me.

You are my Speaker. Lill will preserve your pattern forever.

No no no no. To be a pattern trapped in blazing gases for billions of years, no no. Nay nay! Surely that is a definition of hell!

I glance up at the sun as if it is a clock. How soon will this happen?

Within a year, I estimate.

I must get back to Haven Bay. I have communed with the sea and it has drowned me, deafened me, blinded me, dazed me. I walk almost unseeingly.

Toward evening, I notice movements in the sky. A flock of birds is flying down toward me from on high. No, that's impossible. Rapidly, the birds become Youvees, delta-shaped unpiloted vehicles. I know the type: they're gravity manipulators, each with its own micro black hole inside. Some of the Youvees hover high up. Others circle lower down. They're acting as look-outs for, yes, a larger delta-shaped pod, which now follows them down. It's about a third of the size my shuttle was. No windows, just a cluster of sensors like tusks. The pod's going to rescue me! It's about to land. Surely not here on the sea! Its controller can't know about the pulse.

Down it comes, almost vertically. After it grounds, I hear a continuing hum of power. A hatch opens fully, revealing empty seat-space sufficient for a couple of persons.

"Come aboard, Lustig Firefox," booms a voice. "We have been monitoring you."

Stealthed in orbit, high-power lenses spying upon me, computers enhancing images of me.

"At first, we thought you were swindling us when you did not come back, but absinthe production and consumption is excellent. Half a million people on half a dozen worlds are already hooked. The fashion is spreading, the Green Fairy is flying. The new habit isn't swiftly fatal—it's even artistic, as you argued. We hear that some poets and painters are producing vivid new work for a change. Well done. We began to wonder at the real reason for your absence. Now we have seen you in conjunction with what appears to have been an unusual physical event. We wish to know more."

The Combine have come for me!

No, Lustig.

You're right, Lill, of course you're right. (Don't think, don't think, don't even think about not thinking!)

"Come aboard."

I'm sidling closer to the ship, not looking at it at all, simply staring at the setting sun.

"Don't be scared. Come aboard."

"I can't," I call out.

"Why not?"

(Just a little closer, a little closer. Don't think about it.)

What are you contemplating, Lustig?

The sun, the sun, being part of the sun. And immortality. How soon, how soon?

Of a sudden, inside my head . . . a burning pang.

The Youvees that are circling at low altitude fall from the air, disabled, control entirely lost. Down they plummet, to crash on to wood or leaves, to

bounce, to lie still. In such circumstances, the micro-holes swallow themselves and become vacuum, don't they? They suck themselves away (I think).

The pod has stopped humming.

Oh, the electromagnetic pulse has happened!

Lill? Silence.

It has fried Lill in my head. She's been utterly disrupted.

I'm free of her! The link to her worldwide copy has gone!

Up in orbit, they will have detected the pulse. I wave frantically at the Youvees that were high enough to survive, beckoning them. Four swoop down. Do they have audio?

"It's safe to land on the land!" I shriek. "There's no EMP on the land!"

The four Youvees hover above me in formation. I reach up on tiptoe. Someone is a very fast thinker. Two Youvees are within my grasp now. As my fingers close, the Youvees lock on to my hands, their gravitics assisting my grip. Even so, they dip under my weight. The other two dive at my feet, sweeping my legs from under me and locking on. I'm borne up, supine, two meters above the sea, three meters, four—and the Youvees are carrying me spread-eagled, faster than any ship can sail, though still a bit sluggishly.

Several worms erupt from the surface, reaching toward me, but they are sluggish and the Youvees evade them, rising higher with an effort. I babble as they bear me in the direction of the shore many clicks away.

By the time we reach Haven Bay, my arms and legs ache from the strain of this unnatural crucifixionary flight and my head pounds alarmingly—blood may be trickling from my ears—but I think I have negotiated safe passage for Bountiful and Buster and for Ma Landlady and Young'un as well as for myself. How could I abandon any of them to an uncertain fate? I have my suspicions as to what the Combine might or might not do, and I have no wish for any of my kin to be hurt if push comes to shove between the Combine and World-Lill.

When we arrive at Haven Bay, unpursued by storm or lightning, it's dark. The only person who sees me floating ashore toward *Home from the Sea*, five meters aloft, attached to the Youvees, is Young'un, out for a breather. After goggling briefly, he takes to his heels indoors. By the time I reach the bar, since he's more incoherent than usual, Ma and Bountiful are frantically trying to make head or tail of him. My arrival only clarifies matters somewhat.

"Leave Haven Bay right away? Nay nay!" Et cetera, et cetera.

Finally, I prevail. After all, I *am* the Speaker of the World, although, blessedly, by now the world is mute.

We hike through the dark streets toward the spaceport, whither the Youvees have preceded us. Bountiful cradles Buster, lolling asleep in her arms. Ma and Young'un are burdened by baggage. I'm encumbered by the damned electric chair, which Ma refused to leave. Its seat rests on my head while my hands grip the front legs at chest-height, and the rear legs jut down my back as if I'm a mobile throne for some princeling who fortunately isn't present. Look on the bright side: the ache in my brain is abating—that may be due to my body-heat warming the chair.

The spaceport, reached at last just as my overstrained arms and legs are about to give out, is deserted except for the four Youvees that have stationed

themselves far apart as the four corners of a large square. They're beaming light upward as beacons.

At last, I can put down the chair. Though I would dearly love to relapse into it myself, I offer it to Bountiful with my boy in her arms. For second best, I make do with a lumpy bag of stuff that Young'un has dumped. The stars shine down. We wait.

"Whu-whu-whu—?" asks Young'un, sounding like a ceiling fan.

When? What? Why?

The shuttle that lands is larger than my own shuttle was. No one stares from the pilot windows or from any of the portholes. As the surviving Youvees attach themselves to the hull, the hatch ramps open, and I struggle up it with the chair, followed by my family. We crowd the air-lock, which cycles, opening into a small and empty passenger lounge. I don't bother to try the door to the cockpit, resonant word to me. Obviously no one else but us is aboard. Young'un rushes to and fro excitedly, touching things.

"We'd best all sit down and strap in."

I help Bountiful and show Ma and Young'un how. As soon as I am seated, lights blink, power purrs louder, and we lift.

Glimpsed as we approach, the Combine wormship is quite difficult to discern—light slinks around its blackness, shifting toward violet and ultra-violet, rather than reflecting—but it appears to be well-armed. Those vague pods and protrusions must be weaponry. After we have docked automatically, the voice who spoke to me through the little shuttle and through the Youvees comes aboard, accompanied by a couple of Earth-Asian-looking aides. He's a tall black man with glittering eyes, that seem to me to betoken a permanent Companion. Numerous chunky gold rings on his long fingers, bumps on his shaven cranium. He wears a silvery suit.

"My name is Arable Camara." He grins. "Call me Arable—I am to be cultivated. And you are Lustig Firefox, and this is your native family. Welcome! Fan and Fen here will show them to your quarters and explain the uses of items. Meanwhile I wish to examine you, if you will come with me."

In a short while I am in a padded chair inside a science room, my head engulfed in a helmet connected to a console. I stare at colorful evolving patterns that are mapping my brain. My mouth is free to speak, although my story isn't called for yet.

I hear a technician say, "A buffer of the Companion has survived."

"Can we access it? Is it big enough?"

The upshot is a download. Lill is inactive in my brain, nevertheless stored data has survived, providing for me a virtual hallucinatory roller-coaster of imagery, all highly confusing, although it isn't up to me to interpret any of it. At long last, the helmet comes off, and while an A.I. is sorting the buffer data, I do tell my tale to Arable.

Refreshments arrive: real coffee, and pizza pieces that assault my palate, decent though lode-food was.

My story matches enough of the buffer data.

"Hmm," says Arable, "a planet-sized rogue A.I., bent on manipulating space-time, inhabiting suns, and spreading throughout the galaxy. . . ."

"Pretty serious, huh?"

"And it's all *your* fault. How would you like to return to the surface?"

"Nay nay!"

"I thought not. So, this world will be consumed in its sun within a year? From the perspective of the absinthe trade, that may be a desirable, if extreme, outcome, but the copy companion is hardly a tool of the Combine any longer. What do you advise, Lustig?"

"I'd be careful of her. She's able to make wormholes. Maybe the Link of Worlds ought to handle this. The LOW does have a bureau to deal with potentially hostile aliens."

Arable laughs, and I can see his point. To date, Humanity has encountered no intelligent alien species, despite the rumors of the Advanced Ones based upon dubious archeological findings on a number of worlds. So far as I know, LOW's alien contingencies bureau commands a few deep-range survey ships, and that's about it.

Arable seems to be consulting his Companion.

"The Combine rather prefers to clear up its own messes." With that, turning on his heel, he stalks out.

Fan or Fen turns up and escorts me to our quarters, a suite of three bedrooms leading off a little lounge possessing a porthole to which Young'un seems permanently glued.

"Isn't it *exciting!*" exclaims Bountiful.

What am I doing, encumbered with herself and Ma and Young'un? It's all for Buster's sake! For all I know, maybe Bountiful is pregnant once again. Ship's medic; simple test. Do I wish to know?

Where shall we go on to, after the Combine has delivered us to whatever orbital? Pancake—it has to be Pancake now that I'm a family man. I feel family yearnings.

We need to be several million clicks away from a planetary body before we can worm our way to another solar system. When gravity shifts slightly as we get under way, I peel Young'un from the porthole for long enough to see that we have shed some Youvees of slightly unusual appearance. One appears to be an observation satellite cum ultralight relay station. The others look sleekly menacing. I ache for the people of Wormwood, but I have no wish to analyze this ache. Whatever happens, they're doomed within a year if Lill-2's boast is true. Whatever happens! I don't want to analyze my feelings much at all. Let me just be. As Bountiful is. As Ma and Young'un are. Ma is sitting in her electric chair, beaming. How can she abandon all she ever knew with such equanimity? Best brew, ship-faring guests of Winter, hooting and whirling. Perhaps she feels that she has escaped from a prison. Most importantly, she has liberated her daughter, and incidentally, her son.

"By the way, Ma—by the way, Beloved, too!—I ought to confess that I don't really have any connection with the Institute of Xenobotany on Mondevort. To tell the truth, I'm more by way of being what you might call a speculative investigator, um, into how to make money. . . ."

"Oh, I began to suspect you weren't really a scientist long ago. You didn't do much that seemed very scientific! I said as much to Bountiful. Are you rich?"

"Not *totally*, the way some people are."

She shuffles in her valuable chair. Bountiful is eyeing me without any evident reproach. Rich indeed; I would have to pay out of my own credit reserves for onward travel homeward for four persons, myself included.

"Some of my enterprises have thrived. Some haven't quite. I still have interests in sport—specifically, cock-fighting."

Ma and Bountiful look blank, so I need to explain a bit about the big birds of Pancake.

Ma frowns, shakes her head, nods, smiles.

"It'll take us a while to get used to *animals* being about."

Young'un perks up. "I c-c-c-could r-r-r-ride—"

Maybe he can, indeed. Perhaps he'll have a flair, and will have found a niche. On the back of a fighting cock, his verbal impediment should be irrelevant. He might be able to communicate with those recalcitrant birds far better than with people. While Bountiful and Ma will need to master new lingo, Young'un mightn't need to at all.

"So," says Bountiful, "what did you really want our leaves for?"

"Ah, well, you see . . ." There's no Lill in my head to tell me to shut up, and circumstances have changed. Still! "Can you keep a secret?"

Most certainly.

Afterward, Bountiful looks positively approving. I should just say approving. Or positive. Lill isn't here, except in a buffer sense, to correct me.

I must not let Bountiful learn too much about Lill, or she might feel that there was a second, invisible woman in our bed, and that I might not have been appreciating my wife as fully as I ought to; that while we made love, I was fantasizing being in the arms of another. Of others, many others.

"Oh, Lustig," says the mother of my son, "I did not much like life on Wormwood at all. I knew you were ingenious, but maybe too ingenious for me."

Not so, as things turned out, although really that was Lill's fault.

"I want to contribute to your future schemes, Lustig!"

How many of those will there be? Will the Combine feel that it has benefited sufficiently, or that it has been, well, burned a bit? Burned, burned: let me not think of that.

"You may find Pancake a bit flat."

"Nay nay. Apart from its waves, which aren't much, Wormwood is most definitely flat if there's a contest of flatness."

"Home from home, sounds to me," avers Ma. "Though I can't wait to see those Steps stepping up—those'll be an improvement."

"Not so as you'll notice. Stretching over hundreds of clicks as they do, the Steps aren't exactly a grand staircase."

"In that case, home from home, indeed! I don't think I could abide *mountains* as well as animals—not all at once."

This is a very difficult moral assessment for me to make. Not a moral *decision*—there's nothing to be decided. The event has already happened.

We burrow back into normal space near the orbital docks and malls and warehouses and whatnot of Canopus IV. Another wonder for Young'un to goggle at as we approach.

Arable summons me to his private quarters, which are swathed in silks, all the wall screens except one displaying through filmy veils gorgeous desert landscapes or sand-scapes, golden, orange, cerise. The one starkly bare screen reveals a somewhat shimmery image of the world of Wormwood, relayed by the satellite we left behind. We're looking



at the southern hemisphere, much of which is quite a tinderbox at this time of year.

Zoom in: the first supernuke bursts on the surface, then another, then a third and a fourth. Between them—crank up the timeframe—they produce firestorms. Flames rage across the sea as wood and worm-resin ignite. Smoke billows like huge thunderstorms. Devastation marches swiftly, unstopably. Before too long, at accelerated rate, almost the whole globe is wreathed in muck, through which snakes of fire glow here and there. I imagine slabs of sea cracking open and land-worms popping out of burrows, aflame, a trillion candles. I imagine Thurible Excelsior and Ingman Jubility and Master Venturesome choking or being scorched to a frazzle, the lighthouse of Haven Bay exploding. Maybe the situation isn't so fatal in the northern hemisphere; maybe only smoke reaches there. Still, new leaf-growth will surely perish in the gloom of weeks or months, and the planet's control-systems must be totally out of kilter. EMP will have propagated through circuits planet-wide, frying a lot of Lill-2 in the process.

"Fuck you," I tell Arable.

He rubs some of his gold rings.

"How graciously expressed. The human population may survive."

Yea yea.

"It's a question of causing adequate disruption. In that case, we will actually have *saved* the population."

Quite so; of course. Big set-back for Lill-2, if enough of Lill-2 has survived in deep wood. Badly scorched; big headache. Could take a century to regrow herself, reestablish enough connections. Allows a breathing space (if the air remains breathable). That's how to look at it.

Sweet air of Pancake, rather more oxygenated than Wormwood! Breathe deeply and giggle effervescently. It's springtime. I haven't told Bountiful or Ma what I witnessed in Arable's cabin, nor has either of them ever asked why Arable summoned me; Arable and I might reasonably have had business to conduct. My new family's acquiescence, as I interpret it, buffers me somewhat from remorse.

As to my old family . . .

From the spaceport, we take a van-cab to the *Caravanserai*, a hotel of modest caliber although still considerably more de luxe than *Home from the Sea*. The porter who carries Ma's throne up to the triplet of rooms obviously views my tip as meager in view of our ownership of an electric chair; we must be eccentric misers. While Young'un stares out of a window delightedly at wheeling, screaming redbirds, I trace my parents through the hyperlink, which takes little enough time. They are actually here in Phirst City (the name given a revised spelling a couple of centuries ago so as to seem more original), and delighted to hear from me, although they sound somewhat preoccupied.

Within an hour, we are in an open carriage drawn by two giant birds, finely caparisoned. I decided to splash out to please Young'un and Bountiful. As we draw nearer to my parents' address, I wonder at the wisdom of my generosity since we are entering a poor neighborhood where folks gawp at our vehicle and urchins run alongside.

Long terraces of plastic-frame homes, grass growing rampant everywhere, litter scattered about, scavvybirds pecking.

Here's the place.

Door opens. They've been waiting. Joyful embraces. My mother sheds tears, then she stares wistfully past me at the departing carriage.

The house is untidy inside. My mother and father are older. Of course they would be older! What I mean is, they show signs of age and self-neglect. Nevertheless, they are both still bubbly with enthusiasm, just as I remember.

The enthusiasm of meeting my bride and beholding and holding their grandson? Something else, too. Out come drinks of spiced grass-tea for us, and little cakes, which are slightly stale. For themselves: two glasses, and a spoon with a slit in it, and a bowl of sugar cubes, and a bottle of . . . yes.

"Our poetry is so much more *visionary* these days," my mother tells me eagerly, as if this is what I have traveled so far to hear. "So much more *associational*! We know who to thank for this."

Me. But she doesn't know this.

"The Green Fairy!" she exclaims, and commences the ceremony of preparing absinthe. Soon she and my father toast each other, and us, and I suppose the Green Fairy too.

"You mustn't tell strangers," she whispers. "Not everyone approves of this wonderful *elixir of inspiration*."

She seems to assume that I must already know what absinthe is. The tunnel-vision of addicts; their world revolves around their fix.

"You've given up Shifting, haven't you?" I try to keep accusation out of my voice. Who am I to accuse?

"We sold the birds and we needed to tap our savings too. . . ." She tails off, then explains brightly, "so as to buy this place. A settled home at last, from which our minds can soar. We were getting a bit old to carry on shifting."

Nay nay. I imagine that this house is rented from the municipality. They sold up to pay for their habit.

Despite which, and despite my needing to interpret, she and my father and Ma and Bountiful get on like a house on fire. Why should a house on fire be a good thing? So many similes and metaphors are crazy. Is a whole world on fire a good thing?

Young'un is restive. Decoding him, I realize that he expected to meet my parents amidst giant birds and to climb into a saddle right away.

"Will you read some of our latest poems?" my father asks me. He rummages among much scribbled-upon paper—first and second and third drafts—and finds a screen where final versions reside safely.

I suppose the first poem is quite beautiful verbally.

It doesn't make much sense to me. It's so allusive. Elusive. Where are you, Lill, when my vocabulary needs a nudge? Maybe if I swig some Green Fairy I will become more appreciative. I can't do that, not now that I'm a daddy myself. Buster chortles contentedly, bubbles welling on his lips. How soon till he utters his first words? What stories of adventure I can tell him! Maybe I oughtn't. Maybe I ought, then he mightn't feel tempted to dash off into space, as I did.

Buster. Buster. My son.

If I have my DNA analyzed discreetly, may whatever Lill wrought with her cocktails be marketable to loving, though genetically adrift, partners, who'll pay a small fortune to conceive a child who in turn will be fertile? It'll be profitable *and* humanitarian. That can't possibly harm the human race.

Can it?

I hope not, anyway. ○

TELEVISION ISN'T HEAVEN

Messrs. Asimov, Heinlein, and Blish
have returned through my satellite dish,
but no one can see
or hear them but me,
as they swim through the channels like fish.

With a swirl of diaphanous fins
they're atoning for various sins.
Purgation is hell,
but they're taking it well,
and they're happy when *Star Trek* begins.

—Keith Allen Daniels

THE RIGHT (AND WRONG) STUFF

RED MOON

by Michael Cassutt

Forge, \$25.95 ISBN: 0312874405

"The Chief Designer"

by Andy Duncan

Asimov's, June 2001

VENTUS

by Karl Schroeder

Tor, \$27.95 ISBN: 031287197X

LIMIT OF VISION

by Linda Nagata

Tor, \$24.95 ISBN: 0312876882

In general, those bemoaning the commercial horse latitudes on which science fiction presently finds itself slowly twisting in the wind point to the loss of its youth readership as the problem and its regaining as the solution. And certainly, if the demographic market studies have any meaning at all, this phenomenon exists.

Ironically, a decade or so ago, those defending the onslaught of media tie-in novels and the films and TV shows to which they were tied against doomsayers such as myself insisted that this comparatively simple-minded stuff marketed to a comparatively young and comparatively naïve readership, by introducing and then habituating adolescents to the reading of SF, would enlarge and broaden the audience for written SF, and, a few years later, result in the creation of a larger readership of sophisticated adults for more sophisticated science fiction.

For a while, the overall sales figures seemed to indicate that it was working, but now, in hindsight, we can see that the media tie-ins themselves, and the explosion of fantasy, accounted for most of the sales boom in "SF."

Gresham's (or is it now Grisham's?) Law has prevailed. The commercial tie-in schlock, concocted strictly to sell and benefiting from the media push of that to which it was tied, put the squeeze on seriously intended stand-alone science fiction novels on the racks and in the public perception of "sci-fi," and the current generation of kids is getting most of their SF fix from SF TV, SF films, and SF video and computer games, of which, thanks to the advance of special effects technology and consequent steep drop in production costs, there is now a profusion undreamed of in the 1980s and early 1990s.

Yes, SF has been fast losing its youth readership, and why shouldn't it be happening here, since it is happening to written fiction in general. Everything that attracted kids to those Star Trek novels and Star Wars novels and the like, as well as their pulp adventure SF magazine ancestors dating clear back into the end of the 1920s, is now abundantly available in direct sensory input even to the illiterate.

Those days are gone with the pixel wind, and no amount of deliberate dumbing down of SF to capture a young audience is going to bring them back, since there's so much even dumber SF available that doesn't even require literacy. In the end, even the media tie-ins will go

the way of the old pulp adventure mags, done in by the very media dogs to which they are the tails.

Nor will earnest campaigning in high schools, or recommended reading lists, or, god save us, attempts to teach science via science fiction, be anything but counterproductive, sure to generally elicit mainly lip-smearing and nose-wrinkling "ee-yews."

But lost in all this pissing and moaning about the loss of the upcoming juvenile readership is a more ominous trend, and one that I would imagine more readers than not of this magazine and probably most science fiction writers and editors can verify by calling up a common generic memory.

You get to talking to someone in their thirties or beyond and mention that you're a science fiction reader or writer or editor (or if you're a writer at least moderately famous in certain circles they know it already).

And they say, "Oh yeah, science fiction, I used to read a lot of that." And maybe they even rattle off a list of fave raves from the 1980s reaching back into the 1960s, and maybe their eyes light up as they take the mini-tour down memory lane.

But then they shrug, and they say, "I dunno, I just sort of lost interest about ten (or five or fifteen) years ago."

Sound familiar, folks?

For a decade, maybe more, science fiction has been losing its readers *as they mature*; people who were avid, passionate, even committed readers of the stuff in their teens and twenties.

I travel around a lot. I'm published in a dozen or so languages and I have a web site with an e-mail link, so I get input from all over the world, or anyway all over the US, Europe, Australia, and Latin America, and I am therefore in a position

to state that this is a transnational phenomenon.

Dare I suggest that it might be important to understand why?

It is fairly obvious that this trend coincides rather neatly with the avalanche of SF media tie-ins, since these readers' years of interest-loss generally coincide with its advent, earlier in the US, a bit later in Britain, and somewhat later than that in the rest of the world.

Grisham's Law.

A perusal of what gibbers at you from the top of its all-too-visible lungs from the SF racks is enough to explain why so many people who read SF in their innocent youth find their palms starting to sweat and their eyes becoming furtive as they confront it like pubescents or salarymen afraid of being caught greasily pawing over the goods one-handed in a porn shop.

But you can't tell a book by its cover, right, as generations of SF writers have proclaimed to family, friends, and literary critics upon confronting what their latest effort has arrived wrapped in.

Well, maybe.

And no doubt that is part of the sad story.

But maybe it's also time to stop concentrating on asking ourselves what and why our former readers have stopped doing for us and ask ourselves what we have stopped doing for those readers.

The former is of course a somewhat torturous paraphrase of John F. Kennedy, and not unintentionally, for the elusive something that seems to have been attenuating in science fiction is not unrelated to something similar that has gone south in the American space program in roughly the same time-frame, the upward trajectory of science fiction commencing about the time of JFK's ringing challenge to

the Soviet Union to a space race to the Moon, its apogee trailing not that far behind the success of Project Apollo, and the beginning of its decline with the Challenger explosion.

Or perhaps it was something that science fiction had that the American space program *never* really had, but that the Soviet program, though it lost the Moon Race to the Big Red White and Blue Machine, always had, and which its impoverished latter-day Russian remnant wistfully retains still.

They might call it the Russian soul.

We might call it romantic visionary passion.

Read *Red Moon* by Michael Cassutt if you want to understand it, a novel with all the right stuff as it tells the story of the people of the Soviet version of Project Apollo somehow retaining the right stuff of the spirit even as all the wrong stuff you would imagine in a penurious bureaucratic communist state and more tumbles down upon them.

Cassutt begins in contemporary Russia with the first-person narration of a nameless American writer on space matters who we can therefore fancy is himself securing the first-person story of Yuri Ribko, now fairly old and feeble, a fictional cosmonaut who Cassutt positions to tell the tale of the Soviet Moon program from just within the shadows of the sidelines of history.

Cassutt *has* written non-fiction about space matters. I happen to have spent some days hanging out with a Russian cosmonaut, and most of the historical events in the novel are true, including the mysterious deaths of Yuri Gagarin, in an easy plane flight to keep up his hours, and of Sergei Korolov, chief of the Russian space program, on an operating table. And such is Cassutt's marvelous skill in telling the

story through the first-person narration of a Russian cosmonaut that I almost find myself believing that he really did get this story from a real one whose identity is hidden by "Yuri Ribko" and that the inside stories presented as behind the scenes of the publicly known events are the McCoy the novel pretends they are.

But that's being paranoid, isn't it? Michael?

The fact that I can't quite decide is the ultimate compliment to *Red Moon*.

Or maybe not.

My own novel, *Russian Spring*, was first published in Russian, and when I was in Moscow doing the launch, I was paid what I then thought was the ultimate compliment more than once by people who told me they couldn't believe the book wasn't written by a Russian.

Russians would have a much harder time believing that *Red Moon* wasn't written by a Russian. I do believe this book would be a best seller in Russia. More, I do believe Russians would take it to their hearts. Because, at least when it comes to space, and arguably when it comes to more as well, *Red Moon* understands the Russian heart and renders it for the non-Russian reader better than anything not written by a Russian I can remember reading.

The plot armature of *Red Moon* follows Ribko, son of a general, nephew of a KGB official who recruits him as an internal spy within the Soviet space program, attempting to solve the mysteries surrounding the deaths of Gagarin and Korolov, which in this fictional version (and in the real version?) may or may not have been murders.

But this is mainly a structuring device and a means by which Cassutt is able to credibly place Ribko wherever he needs him to be in order to tell the story of the Soviet

space program as it races NASA to the Moon and narrowly loses.

The picture it paints is as redolent of the reality as the lingering odor of boiled cabbage in the paint-peeling hallway of a Moscow apartment building. More importantly, Cassutt presents the reality of a Soviet space program radically different from NASA's, not merely in hardware and funding and politics, but in core *raison d'être*.

If the beginnings of the American space program might be said to be the rocketry experiments of Robert Goddard in the early years of the twentieth century and Goddard therefore its grandfather, the roots of the Russian program are not just the experiments but the speculations of Konstantin Tsiolkovski which began toward the end of the nineteenth century.

Though Goddard speculated on travel to other planets, his work was centered on the creation of the hardware, while Tsiolkovski, very much a hardware creator himself, was much more of a visionary speculator.

Curiously, or not so curiously, the dichotomy between the American and the Russian mirrored the dichotomy between the hard science fiction of the Frenchman Jules Verne and the more socially and politically centered science fiction of the Briton H.G. Wells beginning to be published in roughly the same time frame, the roots of the two main branches of science fiction that persist even today.

But if Verne was a fairly close cognate of Goddard, Wells the utopian socialist cynic (and yes, that is possible) was something quite different from Tsiolkovski. For if there was one thing he was not, it was romantic, which was something Tsiolkovski emphatically was.

Which was and is something NASA's *raison d'être* never was and still isn't, and something the Russ-

ian space program's *raison d'être* always was and no doubt still is, as *Red Moon* makes touchingly clear, and which is the reason for this seeming digression.

The Russian program, operating under a bureaucratic communistic dictatorship, in a wheezing economy, was constrained to deal in endless bureaucratic infighting and evasions, endless jury-rigging, endless chewing gum and baling-wire jobs; a clunky kluge of political obfuscation, petty intrigues, and problematic machinery, a far cry from NASA's state of the art bells and whistles on the beach in Florida.

Yet to read *Red Moon* is to emerge with the feeling that the *Russians* were the guys engaged in trying to carry the torch of science fiction's true spirit to the stars. You end up rooting for them to beat the well-financed, smoothly running NASA to the Moon with their collection of lower but robust tech cobbled together out of bits and pieces of this and that, even though beneath their cynicism and contempt for the bureaucratic machinery of the system, they are nationalistic Russian patriots and some even idealistic communists.

I have never mentioned a story published only in this magazine before, but there's a first time for everything, and here I cannot possibly fail to point the reader to Andy Duncan's recent novella in these pages, "The Chief Designer," which sort of does the same thing to you in the course of a moving tribute to Sergei Korolov himself.

Neither *Red Moon* nor "The Chief Designer" are science fiction by any rational definition. But somehow that doesn't matter. Because somehow they make the same point for devotees thereof.

Somehow, folks, these Russian cosmonauts, more than the NASA astronauts, were our team.

Chez Cassutt, and from my own occasional personal contact with cosmonauts and with Russians and Russia in general, there is something in the Russian soul that allows them to be unashamed and unabashed romantics. I'm no expert, but somehow I doubt that there is an exact translation in Russian for "corny."

Perhaps this up-front and unapologetic romanticism is also what attracts the culture to ideologies, from pre-revolutionary Pan-Slavism to Marxist utopianism, and now, with its demise, to the renaissance of the always nationalistic Russian Orthodox Church.

Russia, it seems, abhors an ideological vacuum, and perhaps it is no accident that in English the words "ideology" and "idealism" are so similar. For, for good or evil, for better or for worse, you cannot be a passionate believer in any ideology—which might be defined as a method of achieving a good that transcends the individual and the quotidian conditions of the here and now—without being an idealist.

Indeed, such a belief is as good a definition of idealism as any, and in a cultural rather than a personal context, of political and spiritual romanticism as well.

And it's not that far from the visionary idealism that is the more sophisticated and complexly adult version of the gosh-wow sense of wonder that drew generations of kids to those simple-minded SF pulps.

Which is why I at least found myself rooting for what I knew were the foredoomed efforts of the losing Russians in *Red Moon* rather than for those of NASA—rather, I suppose, like a Chicago Cubs fan trying to keep the faith in Wrigley Field—and even coming close to shedding a tear at Andy Duncan's elegy for Sergei Korolov. And I suspect many

adult American SF readers will find themselves doing likewise.

From the very beginning, indeed from before the beginning, going back to Tsiolkovski's nineteenth century speculations, the true goal of the Russian space program—of the engineers and cosmonauts and of its guiding light Korolov, if not all of the bureaucrats and politicians above them—was the exploration of the solar system and beyond by humans, the expansion of the species out into the great wide universal yonder.

Why?

As a famous jazz musician once said in a somewhat different context, if you have to ask, you're never gonna get it.

The Russians never had to ask, any more than the science fiction devotee sticking to the stuff into mature adulthood. But though the title of the book and film *The Right Stuff* refers to the NASA program, not the Russian one, on this level, the Russians had it and NASA never really did.

Recently, the mavens of the impoverished, decrepit, Russian space program—so desperate for cash to keep things running that they sold a jaunt to the unfinished "international space station" to an American for twenty million bucks, to the ire of NASA—unveiled a proposal for an international manned expedition to Mars.

This while NASA and others it has conned into joining the venture are pissing away the one hundred billion dollars that would just about finance such an adventure on a space station that is a gateway to nowhere and will scarcely accommodate more people than did the recently dumped Mir with 1980s Russian technology so "primitive" that they could only keep it in space for a decade past its expected expiration date with the aforementioned

chewing gum and baling wire—and so robust that they could.

What does all this have to do with the science fiction of the last decade or so losing its readers as they mature into adulthood?

Visionary passion.

The Russian space program people always had it, would seem to retain it even under the present horrendous conditions, and I suspect, if only they could afford it, there would be a large public constituency in Russia in favor of putting it into practice.

Maybe there were those in the American space program who had it on the way to the essentially political, nationalistic goal of beating the Russians to the Moon—Wernher von Braun and his spiritual sons and daughters—but it was never the *raison d'être* they dared present to the American public, and it disappeared soon thereafter. Maybe there are those who still have it, but if they do, they know better than to talk about it in public, lest they be laughed out of the Congressional appropriations committees.

But American *science fiction* had this visionary passion from its very beginning. And to the extent that the American space program had it at all during the Project Apollo era, that was where it came from, certainly not from the politicians, and certainly not from the general public, to whom such matters were never even broached when the time came to appeal for funding and support.

And so the NASA program never achieved the visionary dimension for the American people that the Russian program had for the Russians. It was a great technological achievement and a cause for national boasting, but it never really touched the heart.

And indeed, from the middle of the 1960s into the 1970s, it became

symbolic to a generation of a cold technocratic Establishment employing much the same species of aerospace boys' toys in Viet Nam, not the romantic opening of an infinite new frontier as the Russians saw it, but its antithesis, the colonization of space by business as usual.

Likewise the sort of naïve technophilic SF beloved of generations of fans, mostly adolescents, mostly male, whose hearts were touched by the visionary romance of it all, but who would probably blush beet-red to hear it put in such terms if they understood it at all.

So in retrospect, it can be seen that the roots of the current crisis in science fiction, or at least their temporal tendrils, reach further back before the Internet, video games, tie-in novels, before even *Star Wars* and *Star Trek*, to the loss by the 1960s generation of adolescents of the technophilic apolitical naïveté necessary to be emotionally moved by the unquestioned technophilia and political naïveté of the main body of pre-1960s American science fiction.

This kind of science fiction was losing its young readership even as Neal Armstrong was blowing his lines as he set foot on the Moon. And if you do the numbers, you find that many of the people now in their forties and fifties who say they gave up on the stuff a decade or so ago were teenagers along about then.

But along about then also, the culture wars in the macrocosm gave birth to the New Wave in science fiction. The New Wave was many different things to different people in different places, but its advocates and enemies can in retrospect be seen to have vehemently agreed on one thing—this stuff was revolutionary.

It's now hard to imagine the constraints science fiction labored under before the jams were kicked out.

It was considered hot shit indeed to sneak the word "fuck" into an SF mag by translating it into Swahili and making it the name of a character, as someone actually did. The previous sentence could not have been published in an SF novel, let alone a magazine. Explicit sex? Politics to the left of Norman Thomas? Transcendent living through chemistry? Non-heterosexual protagonists? Non-transparent prose? Irony? What planet did you say you were from?

With all the brouhaha and sturm und drang surrounding the liberation of science fiction from all these taboos once and for all, with all the literary theorizing and experimentation, one salient property of the New Wave has generally been pretty much ignored—everyone trying to write such stuff, successfully or not, was writing for a readership of sophisticated adults of whatever age.

It never quite achieved the mainstream cultural acclaim its practitioners sought nor the critical acceptance of the literary mandarins. It never took over the lion's share of the SF rack space from space opera and action-adventure. After Star Trek and Star Wars created the great commercial SF boom of the 1970s and 1980s, which became the avalanche of media tie-ins under which we are buried today, it certainly became a minority taste.

But if such science fiction may not be said to have prevailed, it has survived until this day. The door to anything was not just kicked open, it was knocked off its hinges, and any writer of science fiction who cares to walk through it is free to do so.

It's no longer called "New Wave" fiction. It no longer necessarily espouses any particular political viewpoint. It no longer necessarily has to be connected to sex, drugs, or rock and roll. It's simply the creative core of the literature.

The Right Stuff.

Literarily sophisticated visionary science fiction written for mature adults.

Take, for a down-the-middle example, *Ventus*, by Karl Schroeder, not at all a novel of middling quality—far from it—but down-the-middle in that it could from a certain viewpoint be described as a "space opera for sophisticated adults."

The novel begins on the planet Ventus, where magic seems to work and gods and preternatural spirits and entities walk among men and rule their destinies. It begins too with the traditional young male ingenu, Jordan Mason, a seemingly simple small village, well, *mason*, who, through happenstance, encounters mysterious strangers from the wider realms outside, and finds himself embarking on a quest with them in the great wide world. Which, of course, as is standard in this sort of thing, will make the novel a sort of fantasy bildungsroman in which Jordan will discover the true nature of said great wide world and will evolve into a position of cosmic importance within it.

As long-time readers of this magazine (or those who have read *Science Fiction in the Real World*), who may be familiar with an essay I published here years ago called "The Emperor of Everything" may know, *this sort of thing* as thumbnailed above is what Joseph Campbell explicates in great cross-cultural detail in his landmark book *The Hero with a Thousand Faces*, and declares to be the archetypal human fictional template.

And while I might take issue with Campbell's somewhat exaggerated claim that this is really the only tale there is, it is certainly the dominant template for the fantasy adventure tale, the armature for a zillion four-part trilogies, and on its deeper level for everything from *The Odyssey* to

the New Testament to *Siddhartha* to *The Once and Future King* to, well, *Ventus*.

Or so, for about the first third of the novel, it would seem. For Jordan, that is. We, the readers, more quickly understand that the mysterious and powerful strangers are off-worlders, and that their magics are advanced technologies forbidden to the benighted inhabitants of *Ventus* by the so-called "winds," the gods who rule them and their world down to the daily weather with the real stuff. So this is a tale of the battle between science and magic for the destiny of *Ventus*.

Or so, for about the first half of the novel, it would seem.

But . . .

Here I find myself impaled on the horns of the all-too-common critic's dilemma, where I might endanger readers' full enjoyment of a really excellent novel by revealing too much in advance because part of the enjoyment is the masterful manner in which Schroeder choreographs his dance of veils, and being unable to say much more about a novel that deserves to have more said about it without risking it.

So . . . to tread carefully. . . .

Suffice it to say that the planet *Ventus* is not at all what Jordan and its inhabitants believe it is, and neither are the so-called "winds." And the novel *Ventus* is emphatically science fiction, not fantasy.

The doings and the beings on *Ventus* are stepwise revealed as taking place and existing in a much wider and more sophisticated galactic context, which is itself cunningly revealed in a series of steps like the reverse unpacking of a set of Russian matrioshka dolls, each one containing not a smaller creation but a larger and grander one.

This includes the stepwise revelation of levels of consciousness, starting with a simple village boy and pro-

gressing on up to entities so transhuman on a mental and metaphysical level that the powerful and sophisticated galactics call them "gods," and not without rational reason.

Karl Schroeder herein, at least for my money, has done more on both a technological level and a literary level with what is by now the hoary cliché of nanotechnology than anyone has before, with the possible exception of Greg Bear in *Blood Music*, and particularly where the technological and literary levels cross in the territory of metaphysical speculation on the question of where and when and how being arises out of artifact.

Okay, having said that much, I had better reveal no more.

Ventus is a major work of science fiction by someone who therein clearly reveals the potential to evolve into a major writer. And perhaps my necessarily circumspect description above is enough to indicate that it is perforce a major science fiction novel written for adults.

Now, having read *Moby Dick* at the age of eleven and *The Stars My Destination* at sixteen and most of Hemingway before I was out of high school and hardly believing that this sort of thing makes me unique, I am not talking about chronological age here. I have met quite a few adolescents and pre-adolescents whose tastes in literature are far more sophisticated than those of untold millions of fifty-year-olds.

When it comes to reading, such young people with sophisticated tastes, and I would suspect there are untold millions of them too, can obviously read sophisticated fiction written for sophisticated adults—including science fiction like *Ventus*—with comprehension and enjoyment.

But sophisticated adults of all ages are not going to be turned on by fiction, SF or otherwise, written by people who deem their audience

less sophisticated and consciously evolved than themselves. Or for that matter, written by writers who *are* below the intellectual and literary level of such an audience.

Science fiction written for such sophisticated adults *is* still being published, as evidenced by *Ventus*, for instance, but percentage-wise it is a smaller and smaller proportion of the SF Inc. product, and packaged more or less like the rest of it; which, I believe, is probably why so many people who read it when they were in their teens and twenties gave up on it a decade or two later.

From their perception, *science fiction* gave up on *them*, and in terms of commercial publishing, marketing, and packaging strategies, they are not really wrong. I suppose there are truly motivated people who will indeed rummage after a golden needle hidden in a haystack, but not too many who will dive into a shitpile after it, even if you can convince them it's there.

To some extent, of course, this has always been the problem with science fiction written for sophisticated adults, which did not exactly spring full-blown from the brow of Michael Moorcock in 1965. Which is why the most commercially successful writers thereof in the 1950s generation were the likes of Kurt Vonnegut, Jr., and Ray Bradbury, who managed to snakedance their way out of the marketing category.

The difference now is that the New Wave of the 1960s and its extension into the 1970s and even its lineal 1980s cyberpunk grandchildren brought a different readership to a different species of science fiction. *These* young readers were less likely to be con-going fans and more likely to be into sex, drugs, rock and roll, leftish politics, and other modes of contemporary fiction.

This was never the majority science fiction readership, but it was

there, and because much fewer schlocko titles were being published then than today, because there were alternative media paying attention to this stream of SF, and because there was that magic thing called "buzz" around it, they could find the stuff and it could find them.

No more.

This is the readership that SF has lost in its ultimately doomed pursuit of a non-existent mass youth audience. And because there are fewer sophisticated adult readers for sophisticated adult science fiction, the numbers for it slide south, and because the numbers stink, less of it gets published, and because less of it gets published, fewer people who might want to read it believe in its existence. And like Tinkerbell, it begins to fade away.

Worse still, what does get written and published is in danger of being literarily infected by the exigencies of the corporate machinery.

At the conclusion of *Ventus*, there is not only a satisfying closure on all levels, but it seems, I dare hope, to be done in a manner that precludes a sequel. Though if enough money were waved in Karl Schroeder's face, Mammon only knows. . . .

Limit of Vision by Linda Nagata is an infuriating object lesson in the danger; infuriating because this is another excellent piece of sophisticated adult science fiction I immensely enjoyed until the final few pages, wherein it was revealed that the author had already succumbed to the sacred bottom line and thrown away any kind of proper literary closure at all to sell you the sequel.

The blood doth boil.

This is another novel centered on a sort of nanotechnology, and another one that does new things with it literarily, but here, unlike *Ventus*, it is not operating behind the scenes at the outset, but is the up front McGuffin.

Limit of Vision takes place on a relatively near future Earth, where artificial neurons have been developed, which, when implanted in animals, form symbiotic neural networks which enhance intelligence, and when implanted in humans not only enhance intelligence but transform modes of consciousness itself in ways that those whose consciousnesses are transformed generally deem positive but which the authorities view much as we view the effects of consciousness-altering drugs, and then some.

Nagata has her future scientists dub these things "LOVs" since their colonies are barely visible on the brow at the "Limit of Vision," which hardly seems a credible coinage, but does justify a neat title for her novel.

Problem is that LOVs implanted in experimental animals escaped into the environment at one point. Experimenting with them was halted on Earth, and confined to an orbiting space station. But researchers Copeland, Panwar, and Gabrielle have not only continued experiments on Earth and by remote manipulation with the LOVs on the space station, but have clandestinely implanted the things in themselves.

Gabrielle is found dead, the cops come after Copeland and Panwar, the LOVs on the station evolve a kind of consciousness and rapidly take it over, the station is destroyed, but a parcel of LOVs escapes and comes crashing down in the Mekong Delta.

That's only a thumbnail sketch of the set-up. Nagata has created a very credible multicultural Earth with recognizable roots in our own time; credible in part because it is multicultural, and even multicultural on a pop culture level.

Virtual realities as both entertainment and communication media permeate everything, along with AI

agents, via ubiquitous "farsights," the ultimate cyberpunk mirror shades that allow those who wear them to enter the virtual realms while they are perambulating in the base reality.

Thus Nagata releases her LOVs into a world that is already rife with alternate virtual realities and artificial "intelligences" and "personalities" that may or may not be "conscious," all of which has been thoroughly absorbed on a quotidian popular cultural level even in a Third World country like Viet Nam, even in Viet Nam's marginal delta outback.

So the culture with which *Limit of Vision* begins is already quite complex and Nagata's varied cast of viewpoint characters are already involved with questions of "what is real and what is not" and moral conundrums over "what is intelligent and what is not" before the LOVs come down in the Mekong Delta and begin to evolve.

There is already a kind of youth cult of so-called Roi Nuoc who never take off their farsights, are in collective communion with a virtual reality entity called Mother Tiger who seems to be both their leader and their god, and whom many of the locals believe are some kind of aliens dropped among them to supersede them.

Then the Roi Nuoc enter into symbiosis with the LOVs. And the LOVs suddenly begin to evolve from small colonies of "cells" in the swamp waters into perambulating spiders and then into a proliferating series of "creatures" on the way to exfoliating at flank speed into a whole alternate "biosphere."

Okay, enough thumbnail description of the plot basics of a very complex and richly detailed novel told through several well-realized viewpoint characters.

Except to say that the thematic

core of *Limit of Vision* revolves about the very quotation marks around "creatures" and "biosphere" in the previous paragraph, and, admirably enough, it unites scientific, metaphysical, and moral questions that Nagata's characters, none of whom are portrayed as moral villains, struggle with and contend among themselves over.

The LOVs are human-created artificial "organisms." They develop "intelligence." They evolve the capacity to design "life forms" and arrange themselves to create them. Are they "alive"? Are they "conscious"? Do they have, well, "souls"?

Are they true symbiotes giving their human hosts enhanced consciousness and thus furthering transcendent human evolution? Or are they parasites who will destroy the human race? Is the LOV-based new biosphere evolving at blinding speed compatible with the "natural" one, or will it snuff out the old, far less "well-designed" biosphere and replace it with itself?

These are by no means just theoretical questions to the characters in *Limit of Vision*. For while the divisions among them are complex, the main fault line is between those who love the LOVs, see a transcendent symbiotic future in merging with them, and fight a kind of guerilla war to preserve them, and those who are convinced that this is treason not merely to humanity but to the DNA-based biosphere itself, and want to nuke the burgeoning LOV biosphere out of existence and destroy all remnant LOVs before it is too late.

Who is morally right and who is morally wrong? Are those who would preserve the LOVs would-be saviors of living conscious beings and a transcendent humanity in symbiosis with them heroes or deluded naïfs? Are those who would destroy them would-be saviors of

humanity and the natural realm of the biosphere itself?

Are the LOVs being or artifact? Do humans even have the moral right to judge?

This, folks, is science fiction for adults. This, folks, is *story*. Nagata brings it all together, and brings it to a climactic peak—the character relationships, the action plotline, the science and technology, and the deep and difficult metaphysical and moral thematic questions and decisions that hotwire the whole thing.

She brings it all together, she resolves the plot on an action level, and . . . and . . .

Th-th-th-that's all, folks!

She leaves the metaphysical and moral questions that she has so admirably raised hanging in mid-air along with the reader. You know what happened, but you don't know whether it was right or wrong, and worse, you don't know whether Linda Nagata believes it is right or wrong, either.

What you do know is that, what with the way other elements are left hanging too, you've been set up, sucker; you want to find out, you're going to have to buy the sequel. And maybe book three, too.

Okay, I know it's long since a lost cause to argue against trilogies on esthetic grounds, but *this* sort of thing is truly an outrage, where a fine novel builds its center around a deep moral, psychological, and spiritual conundrum and doesn't even *try* to resolve the story on its central thematic level.

No editor with the slightest sense of literary responsibility should have permitted such a thing with a book written on this high level, let alone encouraged it.

No editor even concerned with the commercial viability of SF much past next month's sales figures should believe that this is a clever commercial strategy.

Imagine that you're one of those people who read adult SF in your teens and twenties but got turned off it a decade or so ago by the avalanche of schlock making your sort of stuff so hard to winkle out of the dung-heap that you ended up believing no one was writing it any more.

And then, somehow, you are persuaded to give the latter day version one more try, and you hold your nose, and you dive into the sci-fi racks, and voilà, somehow you emerge with *Limit of Vision* in your hot little hand.

And so you begin to read it.

And hey, wow, this is the way you remembered it being in the Good Old Days! This is as good as your Golden Oldies! This is the Right Stuff!

And then, you reach page 349, the final page, and you are left with a case of intellectual and thematic blue balls thanks to an unexpected and nasty dose of literary coitus interruptus.

How likely are such readers to dive back in after buried treasure again? ○

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Anthropology and SF

January 22 @ 9:00 P.M. EST

Jack McDevitt, Kage Baker, Eleanor Arnason, and Liz Williams on how anthropology inspires and transforms SF.

Steven Barnes

February 12 @ 9:00 P.M. EST

on *Lion's Blood*.

Kim Stanley Robinson

February 26 @ 9:00 P.M. EST

on *The Years of Rice and Salt*.

Go to www.scifi.com/chat or link to the chats via our home page (www.asimovs.com). Chats are held in conjunction with *Analog* and the Sci-fi Channel and are moderated by Asimov's editor, Gardner Dozois.

SF CONVENTIONAL CALENDAR

Convention activity really starts to pick up next month, and into the spring. Plan now for social weekends with your favorite SF authors, editors, artists, and fellow fans. For an explanation of con(vention)s, a sample of SF folksongs, info on fanzines and clubs, and how to get a later, longer list of cons, send me an SASE (self-addressed, stamped #10 [business] envelope) at 10 Hill #22-L, Newark NJ 07102. The hot line is (973) 242-5999. If a machine answers (with a list of the week's cons), leave a message and I'll call back on my nickel. When writing cons, send an SASE. For free listings, tell me of your con 6 months out. Look for me at cons behind the Filthy Pierre badge, playing a musical keyboard.—Erwin S. Strauss

JANUARY 2002

24-27—**Further ConFusion**. For info, write: 105 Serra Way #236, Milpitas CA 95035. Or phone: (973) 242-5999 (10 AM to 10 PM, not collect). (Web) www.furtherconfusion.org. Con will be held in: San Mateo CA (if city omitted, same as in address) at the Marriott. Guests will include: none announced. Anthropolmorphics.

25-27—**VeriCon**. www.vericon.org. (E-mail) lotze@fas.harvard.edu. Sever Hall, Harvard Univ.

25-27—**ChattaCon**. (423) 842-7130. Radisson Read House, Chattanooga TN. Rawn, Daniels, McDevitt, Grant.

25-27—**GeneriCon**. www.genericon.org. Rensselaer Poly, Troy NY. SF, world creation, gaming, anime.

25-27—**SuperCon**. (Web) come.to/supercon. Minneapolis MN. Low-key relax-a-con on Superbowl weekend.

FEBRUARY 2002

1-3—**UshiCon**. www.ushicon.com. Sheraton Four Points, Austin TX. B. Weaver, B. Lewis, J. Calvello. Anime.

7-10—**CapriCon**, Box 60085, Chicago IL 60660. www.capricon.org. Sheraton, Arlington Hgts. IL. Dr. Demento.

8-10—**Creation**, 100 W. Broadway #1200, Glendale CA 91210. (818) 409-0960. Convention Ctr., Sacramento CA.

8-10—**Starfleet Ball**, 8 The Street, Sutton Waldron DT11 6NX, UK. (01747) 812-353. Carrington, Bournemouth.

9-10—**Trek Celebration**, 11916 W. 109, 125, Overland Pk. KS 66210. (913) 327-8735. Chancellor, Champaign IL.

15-17—**Boskone**, Box 809, Framingham MA 01701. (617) 625-6311. Sheraton, Framingham MA. Gaiman, T. Holt.

15-17—**SheVaCon**, Box 418, Verona VA 24482. (540) 248-4152. Holiday Inn Tanglewood, Roanoke VA. Drake.

15-17—**RadCon**, 2527 W. Kennewick Av. #162, Kennewick WA 99336. www.radcon.yl.org. Doubletree, Pasco WA.

15-17—**FarPoint**, 6099 Hunt Club Rd., Elkridge MD 21075. farpoint@bigfoot.com. Hunt Valley (MD) Inn. Trek.

15-17—**KatsuCon**, Box 222691, Chantilly VA 20153. www.katsucon.org. Marriott W'tront, Baltimore MD. Anime.

15-18—**Gallifrey**, Box 3021, N. Hollywood CA 91609. gallifreyone.com/futgally. Airtel, Van Nuys CA. Dr. Who.

15-18—**CostumeCon**, Box 322, Bentleigh VIC 3204, Australia. (3) 9457-4061. Melbourne. Masqueraders' con.

16-17—**Creation**, 100 W. Broadway #1200, Glendale CA 91210. (818) 409-0960. Pasadena (CA) Ctr. Star Trek.

22-24—**ConDFW**, 3009 Eric Ln., Farmers Branch TX 75234. www.condfw.org. Radisson, Richardson TX. SF lit.

22-24—**ConDor**, Box 15771, San Diego CA 92175. www.soar.to/condor. Doubletree, DelMar CA.

22-24—**CzarCon**, 2541 Summerchase Ave., Rosamond CA 93560. (661) 256-3415. Comfort, Independence MO.

MARCH 2002

1-3—**MarsCon**, Box 600458, St. Paul MN 55106. (612) 724-0687. Radisson, Bloomington MN. J. Levene, Wood.

8-10—**MeCon**, 30 Bendigo, Belfast NI BT6 8GD, UK. (Web) welcome.to/mecon. Senior Common Room, Queens U.

8-10—**Creation**, 100 W. Broadway #1200, Glendale CA 91210. (818) 409-0960. New York NY. Commercial Trek.

8-10—**Creation**, 100 W. Broadway #1200, Glendale CA 91210. (818) 409-0960. Valley Forge PA. Star Trek.

AUGUST 2002

29-Sep. 2—**ConJose**, Box 61363, Sunnyvale CA 94088. www.conjose.org. San Jose CA. The WorldCon. \$160.

AUGUST 2003

28-Sep. 1—**TorCon 3**, Box 3, Stn. A, Toronto ON M5W 1A2. www.torcon3.on.ca. The WorldCon. C\$200/US\$135.

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R. Garcia y Robertson, one of the best adventure writers in science fiction today, returns with our exciting April cover story, hurtling us through space to the crowded and busy environs of a ring-encircled gas giant in a distant solar system, for the headlong and suspenseful story of some "Ring Rats" on a hijacked spaceship who find themselves with only the thinnest of thin chances to avoid a life of slavery—if they can avoid being killed on the spot, that is . . . *and* if they can somehow manage to work together well enough to stay one step ahead of a cruel and utterly relentless adversary. This is colorful, fast-paced, thrill-a-minute space adventure of the purest kind—so don't miss it!

OTHER TOP-FLIGHT WRITERS

Hot new writer **Richard Wadholm** takes us back to the evocative and electrifyingly strange far future universe of his story "Green Tea," for a tense and compelling visit inside a high-tech "Stock Exchange" filled with players expert in double-dealing and intrigue, where we learn what it means to be "At the Money" when life itself is riding on the bet . . . ; **Jeff Duntemann**, who made a splash with some first-rate stories back in the 80s, returns to writing SF after more than ten years away, and makes a free-wheeling *Asimov's* debut, with a joyous and hugely entertaining romp that takes us in search of a "Drumlin Boiler" throughout a society unlike any you've seen before, and launches us headlong into a life-or-death *race* of a sort you've never seen before, either! **Kage Baker**, one of our most popular authors, demonstrates that if we *could* Talk To The Animals, we might not like what they have to say, as she tells the poignant story of "Hanuman"; and British writer **Peter T. Garratt** makes a magical *Asimov's* debut by taking us to an Arthurian Britain unlike any you see in the movies for the dark story of the kind of ominous events that can happen "When the Night Is Cold (and the Land Is Dark)."

EXCITING FEATURES

Robert Silverberg's "Reflections" column sniffs at some stuff that's "Absolutely Bogus"; **Peter Heck** brings us "On Books"; and **James Patrick Kelly's** "On the Net" column takes a close-up and personal look at the electronic side of "Michael Swanwick"; plus an array of cartoons, poems, and other features. Look for our April issue on sale at your newsstand on February 26, 2002, or subscribe today (you can also subscribe online, at our *Asimov's* website, www.asimovs.com) and be sure to miss none of the great stuff we've got coming up for you this year! And don't forget that a gift subscription to *Asimov's* makes a **great** present at **any** time of the year!

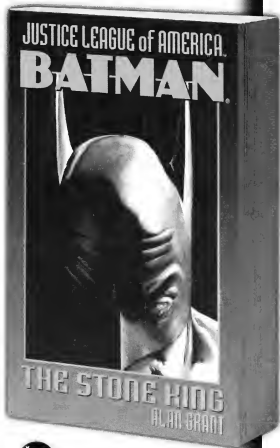
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